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The Goulstonian Lectures

ON

SOME CONSIDERATIONS ON THE NATURE OF DIABETES MELLITUS.

Delivered before the Royal College of Physicians of London on March 16th, 21st, and 23rd, 1905.

BY W. CECIL BOSANQUET, M.A., M.D. OXON., F.R.C.P. LOND.,

ASSISTANT PHYSICIAN TO CHARING CROSS HOSPITAL AND TO THE BROMPTON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST; FORMERLY FELLOW OF NEW COLLEGE, OXFORD.

LECTURE II.[1]

Delivered on March 21st.

MR. PRESIDENT AND GENTLEMEN,—In my former lecture I alluded to the relationship of diabetes to changes in some of the organs of the body which I ventured to think were effects rather than causes of the disease. I have to deal to-day with a more important organ in relation to diabetes—*the pancreas*. Attention was first called to the association of pancreatic disease with a case of diabetes by Cowley in 1788. In this instance the pancreas was found to be atrophied and to contain calculi in its ducts. Claude Bernard discovered that removal of the pancreas in animals was followed by a condition similar to diabetes (1855). The first observer, however, who definitely formulated a theory of diabetes as dependent upon disease of the pancreas was Lancereaux (1877). Subsequently (1889) the experimental side of the question was fully worked out in the classical labours of von Mering and Minkowski; their experiments have been often repeated and their results have been fully confirmed, but little has been added to the sum of our knowledge in this field by the work of their successors. The work of von Mering and Minkowski is so well known that it is unnecessary to do more than to allude briefly to the conclusions that may be drawn from it. They proved that total extirpation of the pancreas in dogs and other animals is invariably followed by a condition exactly resembling diabetes—a condition in which there is not only sugar in the urine, dependent upon excess of sugar in the blood, with the ensuing symptoms of increased appetite and thirst, but also an acid intoxication, with the appearance of acetone and diacetic acid in the urine and a tendency to death in coma. Partial extirpation of the pancreas was not followed by this condition, nor was total ablation of the gland if a fragment of it were grafted into some other part of the body; if, however, as usually takes place, this grafted fragment ultimately disappeared, then diabetes ensued as certainly as if the gland had been removed at one operation. Similarly, if the gland be removed in three separate pieces on different occasions diabetes does not occur till the last piece has been taken away. That this effect is not due to the absence of the digestive juice furnished by the pancreas is sufficiently shown by the phenomena which ensue after ligature of the ducts. In most cases no diabetes or glycosuria is observed; in a few instances there is a transient glycosuria with some increase of appetite and thirst but this passes off within a few days. It was, indeed, objected to these last experiments that the ducts generally re-establish themselves after ligature or section, so that the secretion may once more reach the intestine. To obviate this various experimenters have injected the ducts with substances such as paraffin, soot, and tarry materials (Schiff, Thiroloix, Gley) which produce permanent obliteration of the secretory channels, without causing the appearance of diabetes. Thiroloix, indeed, maintains that by these means it is possible to produce a total atrophy of the pancreas and that yet no diabetes ensues. It is probable, however, that the disappearance of the glandular tissue was not really so complete as he supposed. In some experiments it has been observed that merely separating the pancreas from the duodenum, or handling it, or disturbing it in its relations, may result in the temporary appearance of glycosuria.

It seems to be absolutely proved by these experiments that removal of the pancreas is followed in animals by a condition indistinguishable from diabetes. It is necessary therefore to examine how far clinical and pathological evidence point in the same direction in the case of mankind. Lancereaux in his work on "Diseases of the Liver and Pancreas" described four different conditions of the pancreas which may exist in cases of *diabète maigre* or wasting diabetes—as distinguished from the form of the disease, or rather, in all probability, of simple glycosuria, met with in fat persons. There may be: (1) simple atrophy or aplasia of the gland, in which the cellular elements are diminished in number without any accompanying alteration in the structure of the organ or in the appearance of the cells; (2) atrophy with fibrosis (secondary sclerosis) of the gland and some fatty degeneration of its cells; (3) atrophy with inflammatory fibrosis, the result of infective processes or obliteration of the ducts; and (4) tumours, especially cancer of the head of the pancreas which has led to obstruction of the ducts. This observer, therefore, especially associated *atrophy* of the pancreas with diabetes, though it would seem that he attributed undue importance to disease of the ducts.

Of recent years much attention has been paid to diseases of the pancreas which are now better understood than of old. The chief pathological changes found in it are now recognised to be: atrophy, carcinoma, cystic disease, acute and chronic inflammation, calculi affecting the ducts, and hæmorrhage into its substance and into the surrounding connective tissue. It may also undergo fatty degeneration and may be the seat of abscess-formation and of total necrosis as the result of acute inflammation. It is necessary to consider what evidence there is as to the co-existence of these various diseases with glycosuria and diabetes. The latter is a somewhat rare disease, though not apparently so rare now as in the time of Galen who only saw two cases of the malady.[2] Still, the total mortality from diabetes is somewhere about 7 per 100,000 of the population (Saundby). Among patients admitted to Charing Cross Hospital I find that diabetics, or those who are so classed, amount to about 6 per 1000 of the whole number of admissions. It has been argued that as diabetes is a rare disease and lesions of the pancreas are also not frequent, the co-existence of the two in any considerable number of cases *ipso facto* renders the causal connexion between them highly probable. But is it certain that pancreatic disease is uncommon? I thought it worth while at the time when I was making post-mortem examinations at Charing Cross Hospital and elsewhere to investigate the question, and with this object I cut sections for microscopical examination of the pancreas from 100 practically consecutive cases. Most of them were from cases on which I myself made necropsies, but some were kindly sent me from Claybury Asylum by Dr. Bolton, by permission of Dr. F. W. Mott, these cases also being consecutive and not in any way selected. Some of my own cases were from the Victoria Hospital for Children and a few from the Samaritan Hospital for Women, at both of which I made necropsies at the time. The series was thus not absolutely consecutive at any one hospital but consisted of unselected cases suitable for examination of the point in question. Their ages ranged from four days up to over 90 years. I had hoped to be able to supplement this very inadequate number from which to draw conclusions by examining the records of necropsies at other hospitals; but I soon came to the conclusion that unless a microscopical examination of the pancreas were made it was impossible to say in any case whether it was normal or not, since in many instances the external appearance of the gland might be unchanged in the presence of considerable alterations in minute anatomy. I therefore felt that statistics of the number of cases in which this organ was healthy or unhealthy could not be safely collected from the records of other hospitals, as it is practically impossible to make microscopical examinations of all organs in every case, and it would not be likely that such examination of the pancreas would be made unless there were some gross alteration in its appearance to cause attention to be directed to it. I have had, therefore, to be contented

[1] Lecture I. was published in THE LANCET of April 8th, 1905, p. 903.

[2] This would seem to prove that Galen distinguished diabetes from mere polyuria, of which he could not have failed to observe many instances.

with my own 100 cases. Among them I found a certain degree of fibrosis present in 15. Of these ten were over 40 years of age, counting among these two whose ages were not actually known, but who appeared to belong to this period of life. It would seem from this that a certain amount of fibrosis of the pancreas is not very uncommon, occurring in some 15 per cent. of patients dying from all causes in hospital, while among persons over 40 years of age it is much more often met with (ten out of 54) than in those below this age. In 70 cases (not quite consecutive) which I have since examined the proportion in which I found fibrosis of the pancreas present was approximately the same as in the first 100. The youngest patient in the former series in whom I found any increase of fibrous tissue present was aged 29 years and in this case there was a special reason for such a pathological condition in that he was almost certainly a syphilitic subject. That syphilis may be a cause of pancreatic fibrosis is practically certain as a congenital fibrosis of this organ is met with and has been described by Opie. It appears to be a fatal lesion, the infants succumbing within the first few days after birth. No records seem to exist as to the presence of sugar in the urine of such infants. Since the pancreas is thus affected in infancy it is highly probable that in the adult also it, like other organs, will undergo cirrhosis as a result of this disease. Another comparatively young patient in my series who exhibited some fibrosis of the pancreas died from a ruptured aneurysm, which occurrence affords a ground for suspecting the existence in this instance also of a syphilitic taint.

If the results suggested by a small number of figures which I have been able to collect are borne out by further investigation, it would seem likely that a certain amount of fibrosis of the pancreas is a usual accompaniment of advancing age. Possibly it is preceded by some atrophy of the glandular elements, the fibrous tissue merely taking the place of higher cells which have disappeared. The condition may thus be correlated with fibrosis of the arterial system and with chronic granular kidney. Atrophy with secondary fibrosis was assigned by Lancereaux as one of the causes of diabetes. It is interesting to remember in this connexion that diabetes is usually a disease of advanced life so that its incidence somewhat corresponds with that of pancreatic fibrosis. It is clear, however, that some fibrosis of the pancreas may exist without diabetes, for only two cases of that malady came into my series of 100 cases. I did not find any traces of fibrotic change in the pancreas in any of the children whom I had the opportunity of examining; but apart from the congenital syphilitic form of pancreatic fibrosis, an acquired form of fibrosis does seem to exist, as was proved to me by a specimen sent me by Dr. A. D. Jollye of Brixton for examination. This was taken from a child, aged seven years, who had suffered from severe tetany during life. At the necropsy the only visible pathological condition was in the pancreas which was much enlarged. On examining it microscopically I found that it was the seat of marked fibrosis. The cause of this was not ascertainable, though it was impossible not to think of syphilis in view of the irregular distribution of the fibrous tissue. Whether the pancreatic condition had any relation to the tetany was also problematical. This disorder is usually attributed to the absorption of some toxic material from the stomach and it is possible that an affection of the stomach and duodenum was followed by secondary cirrhosis of the pancreas by extension of inflammation up the duct of Wirsung. Diabetes in children is not common. When it occurs it is rapidly fatal as a rule, suggesting the existence of some extensive or progressive lesion of the pancreas if this organ be at fault.

Opie has distinguished two varieties of fibrosis of the pancreas: (1) one, a coarsely distributed variety, in which the fibrous bands pass between the lobules of the gland, embracing groups of acini in their meshes; this he calls the "interlobular" variety; and (2) a more finely distributed fibrosis in which the new tissue passes between the individual acini ("interacinar" fibrosis). He considers that diabetes is related to the latter (for reasons which I shall mention later), not to the former. The varieties of pancreatic fibrosis are thus somewhat analogous to the types of cirrhosis of the liver, in which we recognise a multilobular or portal cirrhosis, with coarsely distributed bands of fibrous tissue, and a unilobular or biliary cirrhosis in which the fibrous network penetrates between the single lobules. In the latter the liver is often much enlarged, whereas in the former it is generally shrunken if the cases have lasted long. The same appears to be true of the pancreas. The common form of fibrosis is accompanied by shrinking of the gland and often by atrophy or fatty degeneration of the cells. But the organ may, on the other hand, be considerably enlarged. In one case of diabetes, which I had the opportunity of observing before I began to collect a series, the pancreas was of vast dimensions, weighing just one pound instead of some three or three and a half ounces. It was thus more than four times its usual weight and was tough and hard in consistency. Microscopically it was seen to be penetrated by new bundles of fibrous tissue, both coarsely and finely distributed. I shall refer to the details of the case a little later. It may be remarked that the pancreas is an organ in which it is difficult to be certain of the reality of slight degrees of fibrosis, as the connective tissue in it is normally somewhat irregularly distributed.

With regard to the relation of *atrophy* of the pancreas to diabetes Hansemann distinguishes two varieties of atrophy of the gland: (1) one in which there is simple wasting of the cells, and (2) a second in which this wasting is accompanied by fibrosis. The former occurs in cases of general failure of nutrition and is a secondary change; it may be called "cachectic" atrophy. The pancreas is found to exhibit a rounded, almost cylindrical form and to be of normal consistency. It is sharply marked off from surrounding parts and is easily removed from the body, being free from adhesions to neighbouring structures. The cells and lobules are shrunken but the organ is not pigmented, nor is it fibrous. In the second form of atrophy the pancreas is soft in consistency and dark in colour; it is flattened from before backwards and is closely adherent to surrounding parts. The gland is permeated by an increased amount of fibrous tissue and there may be some cellular infiltration. The condition thus somewhat resembles that of a granular kidney which is fibrous and adherent to the tissues surrounding it and, like granular kidney, it is very probably related to arterio-sclerosis. It is this latter variety of atrophy which is associated with diabetes.[4] In other words, although Hansemann lays stress upon the atrophy it would seem to be fibrosis of the pancreas which is the principal lesion associated with diabetes—a condition apparently analogous to the atrophic form of cirrhosis of the liver. In both organs, however, there seems no means of determining whether the atrophy of the cells leads to increase of fibrous tissue, as in the case of the nervous system, or whether the fibrosis is of an inflammatory nature and contraction of the scar-tissue produces injurious pressure upon the glandular acini.

Fatty degeneration of the pancreas—using the term "degeneration" in a wide sense without determining whether it is an infiltration, so-called, or metamorphosis—is not uncommon. Among my 100 cases I found a recognisable degree of fatty change present in ten instances; in three cases it was combined with some fibrosis. A case of diabetes dying in coma exhibited very advanced fatty change along with fibrous overgrowth, and some degree of fatty degeneration was present in most of the cases of diabetes which I have examined. In fat persons the gland is not infrequently penetrated by columns of fatty connective tissue passing between the lobules, but the cells of the acini appear normal. Hansemann notes that in a few cases of diabetes fatty degeneration of the pancreas has been found after death as the only discoverable lesion.

Calculi in the pancreatic ducts have been associated with a certain proportion of cases of diabetes. Thus, as already mentioned, the original observation of Cowley was of this condition. Hansemann notes that out of 72 cases which he collected from medical literature calculi were the cause found in 14 instances. It is clear that these concretions cannot exert a direct action on the process of sugar-formation, since all that they can do is to block the ducts; and, as has already been mentioned, ligature of these does not seem to be an efficient cause of diabetes or lasting glycosuria. But the continued existence of obstruction to the outflow of secretion is accompanied by injurious pressure in the acini, analogous to the condition present in the kidney in cases of obstruction to the exit of urine. In both organs alike cystic dilatation of the ducts and atrophy of the secreting cells ensue, accompanied by an overgrowth of fibrous tissue. It is to this atrophy of the glandular cells that the diabetes associated with calculi must be attributed. It has, however, been found experimentally that injection of pancreatic juice into the ducts of the organ is followed by the appearance

of sugar in the urine, so that a temporary glycosuria might ensue as the result of impaction of a calculus before any destructive changes occurred in the organ; this glycosuria might pass off if the calculus escaped or was removed, or it might become permanent if no such relief was afforded.

Carcinoma of the pancreas is not a very infrequent condition as a primary lesion. Secondary growths of cancer in this organ do not seem very common. I have met with two cases of secondary deposits of sarcoma in this position; in each case the primary growth was in the thyroid gland, but this was probably a mere coincidence. The relations of carcinoma of the pancreas to glycosuria are somewhat curious. The latter symptom is not constant; it may appear late in the history of the case or it may be noticed early and pass off again. The absence of permanent diabetes in many—indeed, in most—cases of cancer of the pancreas is probably due to the fact that the disease does not destroy the pancreatic cells entirely; in the most extensive cases the new growth rather insinuates itself between the cells so as to obliterate the normal structure of the organ, while in the majority of instances the tumour remains limited to one part of the gland, usually the head, leaving the rest unaltered. The temporary glycosuria observed depends in all likelihood upon interference with the outflow of pancreatic juice which, as has just been mentioned, may produce glycosuria. In many instances of primary cancer there is coexistent fibrosis of the pancreas along with the new growth and it is difficult to ascertain which was the primary condition—whether the cancer produced the fibrosis by obstruction of the ducts of the gland, as a calculus may do, or whether the new growth arose in a fibroid organ, as seems to be the case most frequently in primary cancer of the liver, the tumour originating in all probability in a group of cells isolated by the fibrous overgrowth similar to the groups seen in the so-called multiple adenomata of the cirrhotic liver.

Hæmorrhage into the pancreas may be associated with the appearance of sugar in the urine. The following case may be quoted as an example. A laundress, aged 53 years, was admitted into Charing Cross Hospital under the care of Dr. J. M. Bruce on Jan. 24th, 1893, complaining of abdominal pain, thirst, and dypsnœa. Her previous history had been uneventful; there was no history of syphilis. A week before admission to hospital she was seized with pain in the abdomen which rapidly swelled and became hard to the touch. At the same time she complained of increased thirst and of shortness of breath and had a difficulty in getting about. On examination she appeared to be a well-nourished woman; her face was flushed and her tongue was dry and covered with brown fur. Her temperature was 100° F. and she complained of great thirst. There was pain all over the abdomen, which was uniformly distended, so that the umbilicus was obliterated. Tenderness was general over the abdomen, but there was increased resistance in the epigastrium and hypochondria, especially on the right side. The bladder was distended and the edge of the liver could be felt about one and a half inches below the costal margin. She was delirious at night, trying to get out of bed continually. She passed from 54 to 60 ounces of urine per diem, the total amount of sugar present varying from 1012 to 1125 grains. Her temperature gradually rose, and on the 29th and 30th she had rigors. On the latter day acetone was noted to be present in the urine. She vomited and became very restless. Finally she died in collapse without any appearance of coma. At the necropsy there was found "a good deal of turbid fluid in the peritoneum; some little lymph between the coils of the intestines." The layers of the mesentery were everywhere separated by a large mass of disintegrated blood clot and blood-stained fluid. The stomach was adherent to the left lobe of the liver and on separating the two several pints of blood-stained grumous fluid escaped. "The fat was everywhere speckled over with opaque dead-white points which appeared to be composed of necrosing fat. ..... In the situation of the pancreas was a breaking-down mass of tissue along with much bloody fluid. Some loose shreds of tissue as big as a fist were floating in this cavity; they appeared to be portions of the pancreas." No other morbid conditions were found.

In this case, therefore, there was destruction of the pancreas by a hæmorrhage, and with the exception of the secondary peritonitis and fat-necrosis this was the only morbid condition. In this patient there had been no symptoms of diabetes before the sudden onset of the illness; yet on her admission to hospital she exhibited all the signs of the malady—thirst, glycosuria, and finally acetonuria. Such a case constitutes a natural experiment on removal of the pancreas in a human being and the results exactly correspond with those obtained in animals. Here, at least, the connexion between a lesion of the pancreas and the onset of diabetes appears to be absolutely proved. The death of the patient was apparently due to the peritonitis accompanying the necrosis of the pancreas and not to the diabetes, as the patient did not die in coma but in a state of collapse. The presence of acetone in the urine in such a case appears to show that no distinction, such as that quoted from Professor Tyson in my first lecture, can be drawn between pancreatic diabetes and "severe diabetes accompanied by acid intoxication." Experiments on animals show that the latter phenomenon is characteristic of pancreatic defect.

If we examine the results of observations as to the coexistence of gross lesions of the pancreas with diabetes, we find very different figures given by different writers. Hansemann, who carefully studied the question and formed the opinion already alluded to that a special form of atrophy with fibrosis was characteristic of the disease, found alterations of the pancreas present in 40 out of 59 cases. Windle found 74 cases of pancreatic disease out of 139 cases; Frerichs, 12 out of 40; Seegen, 17 out of 92; and Naunyn, 1 out of 40 (I quote the figures from Professor Tyson). It seems almost impossible to reconcile the figures given by Naunyn with those found by others. I have not myself had the opportunity of examining many cases of diabetes post mortem since undertaking this inquiry; but of seven cases in which I have examined the pancreas I found distinct alterations present in five, consisting in fibrosis of varying degrees with some fatty change. In a sixth case, that of an old man with advanced arterio-sclerosis and gangrene of the leg, the vessels in the pancreas were markedly sclerosed; the glycosuria had been intermittent. It might be suggested that this was due to intermittent pancreatic failure, analogous to the "intermittent claudication" sometimes met with in arterio-sclerosis. In the remaining case I was unable to discover any noteworthy pathological condition except sclerosis of the vessels. Looking through our post-mortem registers I find in the last ten years 12 necropsies on patients dead from diabetes. In seven of these the pancreas was noted to be small, in four it was distinctly fibrous to the naked eye; in only one case did it appear even macroscopically to be absolutely normal. The microscopical appearances are unfortunately not recorded in the notes.

The difficulty of which I am most conscious in endeavouring to establish a connexion between the pancreas and diabetes is not that of finding pancreatic lesions in cases of diabetes but rather the fact that quite as severe lesions may occur in cases in which there has been no diabetes; for the pancreatic cirrhosis in two at least of my seven cases was only moderately extensive, while I have found very advanced fibrosis apart from diabetes. At the same time diabetes is the condition with which pancreatic disease would appear to be most frequently associated, for whereas five out of seven diabetics[3] exhibited lesions the figures for other diseases are:—

Arterio-sclerosis, 6 cases of pancreatic disease out of 11 cases examined.								
Carcinoma,	4	,,	,,	,,	,,	16	,,	,,
Tuberculosis,	3	,,	,,	,,	,,	14	,,	,,
Aneurysm of the aorta,	1	,,	,,	,,	,,	3	,,	,,
Heart-disease	2	,,	,,	,,	,,	9	,,	,,

All authorities appear to be agreed that there are a certain number of cases of diabetes mellitus in which no alterations are discoverable in the pancreas. They differ as to the proportion of such cases. On the other hand, many cases exist in which the pancreas is the only organ in the body which exhibits any sign of disease. The attempt to reconcile these facts presents a difficult problem. Several answers may, however, be given. In the first place, the suggestion has been made that it is not the glandular cells lining the acini of the pancreas and forming the main bulk of the organ by which the sugar-regulating function is carried on

[3] If I were to add to these one case of diabetes characterised by almost total replacement of the pancreas by fibrous tissue, from which a portion of the gland was kindly sent me by Dr. Mott, and a second case (referred to below) from which I received a specimen of the pancreas from Dr. R. Salusbury Trevor, my figures would show seven cases of distinct pancreatic lesions out of nine cases of diabetes.

[4] The number of cases of arterio-sclerosis is almost certainly understated. I count only those in which this condition was definitely recorded in the post-mortem notes. Moderate degrees of this condition would probably escape record.

but certain special cells of different formation which are scattered throughout it in small distinct masses. These are the "cell islands" named after Langerhans who first described them. They appear to be formed from the same rudiment as the rest of the pancreas and are epithelial in nature. According to the accepted view they are at first connected with the ducts of the gland and this condition seems to persist for some little time after birth, as Opie has depicted a small duct entering an island of Langerhans in a case of congenital syphilitic pancreatitis. In adult life, apparently, this connexion with the ducts becomes obliterated and the islands remain as small groups of polygonal cells surrounded by a fine capsule which separates them from the surrounding acini. This separation does not appear, however, to be absolute, as it is possible to see islands here and there in which the cells are apparently continuous with the cells of the acini without any intervening fibrous tissue. These groups of cells are richly supplied with blood and are penetrated by a network of capillaries. They are scattered throughout the pancreas, but are considerably more numerous towards the tail of the gland. In stained specimens of pancreas the protoplasm of the cells forming these islands seems usually to take on a slightly different colour or a different depth of tint from that of the acinar cells, suggesting a slightly different chemical composition and therefore a different function, but the staining of the glandular cells is not constant and not much weight can be attached to such an observation. The general appearance of the islands of Langerhans thus somewhat resembles that of the glomeruli of the kidney, and they have been called by Kühne and Lea "pancreatic glomeruli." They differ, however, from the renal glomeruli not only in their irregularity of size and shape but also in that they have no connexion with the ducts of the organ, and hence their condition resembles rather that of a ductless gland, such as the thyroid or the suprarenal body, especially in view of their rich vascular supply. It has therefore been suggested that these cells are the source of the internal secretion of the pancreas. The idea was first mooted by Laguesse in 1895 and was adopted by Schaefer. It has since been supported by Opie and many others who have brought forward cases apparently pointing to a connexion between disease of the islands of Langerhans and diabetes. It may be of interest to mention that attempts have recently been made to connect the hypothetical internal secretion of the testis with certain special cells found in the organ, lying separate from the spermogenic cells of the tubules. If this hypothesis be proved true it will afford some support to the similar suggestion in the case of the pancreas; but the reality of this source of internal secretion is equally far from actual demonstration in the case of both organs.

It has been found that in diseases and injuries to the pancreas the islands of Langerhans often escape while the glandular cells are destroyed. Thus in experimental ligature of the ducts the pancreas appears to be converted into a mass of fibrous tissue, but the islands can often be discovered lying among the new tissue uninjured. This is probably owing to their lack of connexion with the duct-system of the organ; and it is possible to explain in this way the failure to produce diabetes which has been observed after ligature of the ducts or injection of them with tarry materials. Similarly, in some cases of inflammation of the pancreas the islands are said to escape the destruction which affects the acinar cells. In addition to this negative evidence tending to show the persistence of the islands of Langerhans in cases of apparent destruction of the pancreas in which diabetes does not occur, there are brought forward cases in which lesions of these structures have coincided with the existence of diabetes. A peculiar hyaline degeneration of the islands of Langerhans was described by Professor R. Saundby in his Bradshaw Lectures in 1890 and Opie has brought forward cases definitely connecting the condition with diabetes. In his first case, it is true, the degeneration was not confined to the islands but invaded some of the other portions of the gland; but in a later communication he recorded an instance in which this affection was the only visible lesion in a case of diabetes, the islands being apparently picked out by the degeneration and the rest of the pancreas remaining normal. Ssobolew found that in 18 cases of ordinary pancreatic atrophy in which there was no diabetes the islands of Langerhans were quite unaltered, whereas among 15 cases of diabetes there was recognisable alteration in these structures in 13 instances. Opie points out that in cases of coarse fibrosis of the pancreas the islands are not generally affected, whereas in the fine variety of fibrosis of the gland the new tissue tends to invade the islands and so to cause diabetes. Schmidt has seen a case of diabetes in which there was acute inflammation of the islands of Langerhans, with only a few similar foci in the rest of the pancreas; he points out, however, that in this case—a child, aged ten years, who was passing 6·8 per cent. of sugar in the urine—the diabetes must have lasted longer than the inflammation of the islands. Yet it is difficult to imagine a cause of inflammation which could pick out these structures and spare the rest of the pancreas. Seeing that the islands are shut off from the ducts of the gland no irritant could reach them from this source; it is only through the blood-vessels or lymphatics that it could be brought to them, and these equally supply the rest of the organ. It seems, therefore, permissible to question whether there was not in this case a preceding lesion of the islands which rendered them susceptible to some irritant which was not capable of harming the glandular cells or whether the existence of degeneration in these structures may have given rise to irritating products which caused accumulation of inflammatory cells within their capsules. Schmidt quotes two cases of diabetes associated with pancreatic calculi in which the islands appeared normal. In eight cases out of 23 of diabetes he could find no pathological change at all in the pancreas. Weichselbaum and Stangl describe four possible conditions of the islands which may be met with in diabetes: (1) diminution in size or number; (2) vacuolisation; (3) atrophy; and (4) induration or hyaline degeneration. They found affections of the islands present in every one of their cases of diabetes. Gutmann out of 14 cases of diabetes found changes in the islands in four; in six there was atrophy of the pancreas as a whole, similar to that described by Hansemann; in two cases no changes at all could be discovered. In three of my seven cases of diabetes the islands of Langerhans appeared to be greatly reduced in number. It seems possible that they undergo fatty degeneration and so disappear, as the distribution of the fatty patches found in such pancreases corresponds somewhat with that of the islands in normal glands. In three of my cases they appeared quite normal. In the arterio-sclerotic case previously mentioned they appeared to be atrophic, the islands themselves being vacuolated owing to disappearance of many of the cells.

The most remarkable statistics on disease of these structures in diabetes are those given by Lancereaux, who states that out of 167 collected cases no less than 130 showed alterations in the islands. Such results are very striking and if confirmed by others will go far to prove the connexion between these structures and diabetes. Experiment upon the islands alone is almost impossible. Lewaschew stated that by carbohydrate feeding and the injection of pilocarpine many of the acini of the pancreas may be converted into islands, but Opie repeated the experiments and was unable to confirm these results. Herter and Richards state that injection of suprarenal extract causes granular degeneration of the cells of the islands. It has been suggested that the islands are immature acini waiting to be converted into mature glandular cells, but there appears to be no increase in the islands in a fragment of the pancreas left behind when the rest is removed, so that they do not seem capable of giving rise to new acini. On the other hand, Schmidt states that in some cases of fibrosis the islands are increased in number and size and he believes that they may be formed out of secretory tissue. He speaks of cases in which whole lobes of the pancreas are converted into cells resembling those of the islands. I have myself noticed that in many instances a curious change is found in large areas of the gland, the cells being no longer arranged in acini around central spaces but lying apparently closely packed side by side without any definite structural arrangement. As to what the nature of the change may be I have no suggestion to make, as the condition was met with in cases in which other parts of the gland seemed quite normal, while the cells in the altered portions stained in a manner similar to healthy cells. There does not seem, however, sufficient evidence upon which to consider these altered portions of the pancreas to be converted into a new formation of "islands" and it seems probable that the condition is a post-mortem change. I have, however, seen portions of pancreas in which the islands were so numerous as to form a large proportion of the tissue present. With

the view of Schmidt that the islands are formed from the glandular acini I am inclined to agree, in view of the appearances presented in many cases. Not only are the islands quite irregular in shape and size but one sees islands in which the typical cells are surrounded by a ring of secreting cells; others, again, in which masses of these latter are inclosed within the insular cells, and others in which cells staining like ordinary glandular elements appear to form part of the island and to merge into its structure. Increase of the islands has been described in some cases of infective disease, but the number and size of these bodies vary so greatly in different specimens of pancreas without any ascertainable cause and also in different parts of the same pancreas that it is practically impossible to fix upon an average number or size which is to be considered normal and which shall serve as a standard of comparison.

Ssobolew found in one case of diabetes enormous enlargement of the islands ("struma of the islands"), so that some of them measured as much as 1·5 millimetres in diameter. He suggests that this represented either a compensatory hypertrophy to make up for the loss of others which had disappeared or a process of tumour-formation. Hyaline degeneration was present in some of the islands in this case, apparently starting in the capillaries, not in the cells themselves. The nature of the degeneration would thus seem very similar to that of amyloid change which starts in the vessels and only injures the cells secondarily by pressure. In a specimen kindly given me by Dr. Salusbury Trevor, of St. George's Hospital, the hyaline portion of the islands also seemed in most cases to be formed of degenerated capillaries, but here and there hyaline areas seemed to be formed of degenerated cells. Hence it seems doubtful whether there are not several conditions included in this so-called hyaline degeneration. On the whole, it is impossible at present to say that the relation between the islands of Langerhans and diabetes has been established. Hansemann, who has made a careful study of the pancreas in diabetes, denies that there is any connexion. Opie's case does, indeed, at first sight appear to afford an *experimentum crucis*, but it is so far lacking in sufficient corroborative evidence to establish a general rule. I could not be certain of any special alteration of these structures in any of my cases—certainly quite as marked changes were present in non-diabetic subjects. On the other hand, Lancereaux's statistics are very striking. Further, it seems to be admitted that hyaline degeneration of the islands has scarcely ever been observed in any other disease than diabetes,[5] so that there appears to be some connexion between them. The possibility is not, however, excluded that in diabetes the degeneration of the islands may be a secondary phenomenon. Still, the suggestion of these structures as the source of the internal secretion of the pancreas is a tempting hypothesis and explains some facts hitherto difficult to understand. More investigation is necessary before the question can be regarded as settled.

Even granting the connexion of the islands of Langerhans rather than of the secretory cells of the pancreas with diabetes there remain some cases to be explained in which no alteration of any part of the pancreas can be discovered. With regard to these we have to remember that, as has already been mentioned, we are dependent for our diagnosis of diabetes upon one symptom alone—the presence of sugar in the urine—and it is evident that such a criterion is liable to be fallacious. It can hardly be doubted that we at present include under the term diabetes cases of very different natures. Every clinician must be familiar with cases in which sugar is found in the urine of a patient who comes for treatment for some entirely different condition—cases in which the patient appears to suffer no inconvenience from his glycosuria and goes about his work as usual until diabetes is diagnosed on account of the discovery of sugar. It seems almost certain that many of these persons are the subjects of an entirely distinct condition from those acute cases in which thirst, increased appetite, and rapid wasting are such distressing features. It is with the latter type of case—*diabète maigre*—that Lancereaux would associate pancreatic affections. They seem, indeed, to constitute a class by themselves, worthy of recognition as a separate disease, to which we should limit the name of diabetes, classifying the others as various forms of glycosuria, in which the appearance of sugar in the urine is indeed often a prominent feature, but in which there does not exist that internal breaking down of the tissues into sugar characteristic of the graver disease.

But a second possible explanation has to be considered and that is the fact that we are not yet in a position to exclude the existence of disease in any organ because our present methods of examination do not reveal definite structural alteration. Although true functional disease as opposed to organic cannot exist, yet there are only too many conditions in which the perversion of function is all that we are able to recognise. Minute alterations in the molecular composition of the pancreas may be present in some instances which we cannot discover with the microscope.

Thirdly, we have to take into consideration the influence of the nervous supply of the pancreas. It is conceivable that although the cells themselves may be normal in structure, yet if they be acted upon by abnormal nervous stimulus they will give rise to different products or fail to produce any secretion at all. Of the effect of nervous influence upon the origin and extent of glycosuria we have many proofs. In many cases probably these nervous stimuli act upon the liver in a manner analogous to the diabetic puncture, thus causing the outpouring of increased sugar into the blood. But in some in which true diabetes ensues it may be that the internal secretion of the pancreas is affected. If there can occur, as is well known, a sudden drying up of the salivary secretion as a result of fright we can equally suppose a sudden cessation of the formation of an internal secretion. If a total alopecia may result from shock and persist subsequently—and cases of such an occurrence have been met with—the defect of pancreatic secretion may equally persist as a permanent lesion.

In connexion with the question of the relation of pancreatic disease to diabetes it may be of interest to consider how far the known causes of the former correspond with those responsible for the latter condition. I have already alluded to the fact that both diseases tend to occur towards the latter part of life, diabetes being usually first complained of after 40 years of age and pancreatic fibrosis also occurring with greater frequency after this period. The connexion of arterio-sclerosis with fibrosis of the pancreas is also recognised, and this degenerative state has been frequently noted in diabetics, in whom it is probably responsible for most of the cases of gangrene of the extremities which occur, as well as being one of the assigned causes of the onset of the disease. The association of gout with diabetes is not improbably due to this accompaniment of both conditions. Another cause of pancreatic fibrosis, as already pointed out, is syphilis, and this infection almost certainly plays an important part in the production of a certain proportion of cases of diabetes; in my series, as previously stated, it was a likely factor in 12½ per cent. The most important cause of pancreatic fibrosis is probably the entry of micro-organisms by the ducts from the duodenum. This has been proved experimentally to cause inflammation of the gland and subsequent scarring. A history of digestive disturbance is not uncommon in diabetic cases and a certain number seem to date from a definite attack of vomiting and diarrhœa. Such instances may perhaps be associated with pancreatitis from intestinal catarrh. It might also be suggested that the abdominal, and specially epigastric pain, to which I have alluded as so often complained of by these patients, may be connected with inflammation of the pancreas. The apparently infective cases of diabetes, such as those collected by Hutinet, may perhaps be attributed to this method of causation, although this observer suggests that the infective agent in such instances acts by producing a condition of arterio-sclerosis.

Finally, the frequency of a history of alcoholism in diabetic cases fits in well with the pancreatic hypothesis of its causation. As cirrhosis of the liver is caused by this drug so fibrosis of the pancreas is almost certainly due in many instances to its action. Apart, then, from hereditary influences—and some "family" cases are attributed by Hutinet to infection—there is a considerable degree of

[5] I have found hyaline degeneration present in one case apart from diabetes, the patient being a woman, aged 63 years, who died after an operation for gall-stones. There was extensive arterio-sclerosis of the pancreatic vessels and here and there patches of necrosis of the glandular cells. In one or two islands hæmorrhages had occurred. It seems not impossible that the hyaline change may be a result of arterio-sclerosis; its possible association with capillary hæmorrhages may be worth investigation. I have seen what I believe to be early stages of hyaline degeneration of the islands in other cases, but it is difficult to be certain of this. The existence of some degree of hæmorrhagic extravasation into the islands is not very uncommon. I have found it present in five cases out of the last 70, in which I paid special attention to these structures.

correspondence between the causes of acquired diabetes, if it may so be called, and those of pancreatic affections.

In view of the difficulty which at present exists in explaining all cases of diabetes on the basis of pancreatic defect various suggestions have been made in the direction of a joint action of this organ with some other in the regulation of sugar metabolism. In looking round for some organ to which to assign the complementary rôle attention naturally fell first upon the liver. As indicating a connexion between the two it is pointed out that removal of the pancreas causes disappearance, or, at all events, diminution, of the glycogen in the liver, only traces being left a few days after the operation, even when the animals receive a rich carbohydrate diet. On the other hand, injection of pancreatic extract into animals has an exactly similar effect, the diminution in the glycogen being proportional to the amount of material injected (Tyson). Again, if blood is caused to pass through the liver it is found that a certain proportion of the glycogen contained in the latter is removed in the process. If, however, the blood is first caused to pass through the pancreas less sugar is extracted in its subsequent journey through the liver (Lépine). On the other hand, Hirsch found that an emulsion of hepatic tissue destroyed more sugar if an extract of pancreas was added to it. These results appear contradictory and at present inexplicable. Ohlmacher states that the islands of Langerhans show hypertrophy in cases of hepatic disease and regards this as a compensatory hypertrophy to make up for hepatic defect. An elaborate hypothesis as to the interaction of the liver and pancreas in the process of sugar-regulation was formulated by Chauveau and Kauffmann. According to these authors there exists in the medulla a special centre which restrains the formation of sugar in the body and this centre is stimulated by the pancreas. On the other hand, there is a centre in the cervical cord which stimulates the formation of sugar and the pancreas depresses the activity of this latter. These centres together regulate the sugar-forming process which is actually effected by the liver. This hypothesis cannot be said to have proved fruitful or helpful in investigating the problems of diabetes.

In connexion with the question of a possible interaction between the liver and the pancreas allusion may be made to the curious condition known as hæmochromatosis or bronzed diabetes. This affection was first described by Hanot and Chauffard in 1882 and since then a fair number of cases have been recorded, though it remains a very rare disease. The following case which I had the opportunity of observing was apparently an instance of this affection. A man, aged 60 years, was admitted to Charing Cross Hospital under the care of Dr. Bruce, on June 7th, 1898, complaining of severe pain across the abdomen. He was almost certainly of alcoholic habits but denied that he had suffered from any serious illness in his previous life. He had been losing weight for about a year previously to admission. For the last fortnight he had suffered from loss of appetite and a feeling of depression and he had noticed some swelling of his legs and scrotum. Finally, he had been seized with excruciating abdominal pain, of sudden onset, which had "doubled him up" and caused him to come to the hospital. When seen he was still in great pain and was sweating profusely. He was slightly jaundiced. His abdomen was full and there was tenderness over the right hypochondriac region. The liver was felt to be enlarged. His temperature on admission was 102° F. It fell in the course of the next few days and the pain diminished, but the general condition remained the same for some time. On June 14th sugar was noticed to be present in his urine and by the 20th it had reached a large amount. Then it diminished and on the 22nd and 23rd was entirely absent. On the 24th there was 8 per cent. present and on the 25th there was none at all. Subsequently the sugar reappeared and remained constantly present till his death. He improved greatly in his general condition for the first four weeks of his stay in hospital and was on the point of being discharged (July 5th) relieved when he developed erysipelas of the face which proved fatal on July 13th. At the necropsy the pancreas was found to be of the enormous size already recorded (weighing one pound); the liver was greatly enlarged, weighing four pounds two ounces, and was the seat of a finely-distributed cirrhosis. There was a considerable deposit of dark pigment in the fibrous tissue of the organ and in the peripheral zone of the lobules. There was no other discoverable disease nor were other organs visibly pigmented. The pancreas was free from pigment.

The three classical features of hæmochromatosis are glycosuria, hypertrophic cirrhosis of the liver, and pigmentation of the skin and internal organs. Of the viscera the liver presents the greatest degree of pigmentation, but the cells of the pancreas and of the salivary glands and those lining their ducts are also affected; and according to Rabé the lungs are also the seat of pigmentation. The pigment is supposed to arise by a breaking-up of the blood-corpuscles and the pigmentation of the organs takes place in the process of eliminating the products of the broken-down hæmoglobin. Two separate pigments have been isolated, a brown substance containing iron, said by Auscher and Lapicque to be a hydrate of iron; and a black one free from iron. Neither cirrhosis of the liver nor glycosuria is, apparently, invariably present in this disease, nor is a condition of fibrosis of the pancreas always found. The relation of the condition to glycosuria presents, therefore, a very interesting problem. Since glycæmia (as evidenced by glycosuria) is not invariably present it cannot be, as suggested by Hanot and Chauffard, that the existence of sugar in the blood is the cause of the breaking up of the blood corpuscles—an idea improbable in itself, since in most grave cases of diabetes, in which there is a large quantity of sugar in the blood, there is no evidence of pigmentation. The glycosuria of bronzed diabetes seems, indeed, to be a late occurrence in many cases. The peculiar condition of intermittent glycosuria which was found in the case above recorded has not, so far as I know, been previously noticed in association with this condition; but it seems that the disease is susceptible of cure, as in a case recorded by Murri; in this, curiously enough, there were no signs of cirrhosis of the liver; the pigmentation of the skin and the glycosuria disappeared under treatment. It is tempting to suggest that the presence of sugar in the urine in those cases—at all events, in the early stages—is due to disturbance of the liver and is a glycosuria not a diabetes. More probably, perhaps, we are in the presence of a functional disturbance of the pancreas. In some cases, as in the one which I have recorded, the pancreas undergoes serious organic changes towards the end of the illness; and if the affection of this organ is sufficiently grave, true diabetes ensues. The cells of the pancreas did not appear to have suffered any structural change from the fibrosis in Dr. Bruce's case; this may, perhaps, account for the glycosuria being intermittent and not continuous, but it might be anticipated that if the fibrous tissue subsequently contracted or the cirrhosis became more pronounced, permanent interference with the functions of the organ would ensue and lasting diabetes—if this be really connected with pancreatic insufficiency—follow. What may be the source of the poison which causes the destruction of the blood-corpuscles there are apparently no data to help us to determine. The existence of a biliary cirrhosis of the liver and the pigmentation of the abdominal organs to a greater degree than those elsewhere seem to point to a source in the alimentary canal, and the cirrhosis of the pancreas would seem to confirm this conjecture, since, as has been previously mentioned, infection passing along its duct appears to be the usual cause of fibrosis of this gland.

Bibliography.—Auscher and Lapicque, quoted by Rabé. Chauveau and Kauffmann: Le Progrès Médical, 1893, vol. ii., p. 120. Cowley, quoted by Tyson. Gley: Comptes Rendus de la Société de Biologie, 1891. Gutmann: Virchow's Archiv, 1903, vol. clxxii., p. 493, and 1904, vol. clxxvii., Suppl., p. 128. Hansemann: Zeitschrift für Klinische Medicin, 1894, vol. xxvi., p. 191, and Verhandlungen der Pathologischen Gesellschaft, 1901. Herter and Richards: Medical News, Feb. 1, 1902. Hirsch: Hofmeister's Beiträge, 1904, Band iv., Hefte 9 and 11. Hutinet: Thèse de Paris, 1903-04, No. 358. Kühne and Lea, quoted by Opie. Laguesse: Journal de l'Anatomie et de la Physiologie, 1895, 1896; Comptes Rendus de la Société de Biologie, liv., 854. Lancereaux: Bulletin de l'Académie de Médecine, 1877, tome vi.; and Diseases of the Liver and Pancreas. Lewaschew: Archiv für Mikroskopische Anatomie, 1886, Band xxvi. Von Mering and Minkowski: Archiv für Experimentelle Pathologie und Pharmakologie, 1889, vol. xxvi., p. 371; Centralblatt für Klinische Medicin, June 8th, 1889. Murri: Medicinische Woche, March 24th, 1902. Ohlmacher: American Journal of the Medical Sciences, 1904, p. 287. Opie: American Journal of the Medical Sciences, May, 1902; Bulletin of the Johns Hopkins Hospital, 1900, vol. xi., p. 205; Journal of Experimental Medicine, 1901, p. 397 and 1902, p. 527. Rabé: Revue Médicale, July 12th, 1901; La Presse Médicale, Feb. 22nd, 1902. Saundby: Allbutt's "System of Medicine," 1897, vol. iii., art. "Diabetes Mellitus." Schiff: Centralblatt für Medicin, 1872, p. 790. Schmidt: Münchener Medicinische Wochenschrift, 1902, No. 51. Ssobolew: Centralblatt für Allgemeine Pathologie und Pathologische Anatomie, 1900, p. 202. Virchow's Archiv, 1904, Band clxxvii., Suppl., p. 127. Thiroloix: Gazette Hebdomadaire de Médecine, March 2nd, 1895. Tyson: University of Pennsylvania Medical Bulletin, 1902, p. 196. Weichselbaum and Stangl: Wiener Medicinische Wochenschrift, 1901, No. 41, and 1902, No. 33. Reference may also be made to Dieckhoff, Beiträge zur Wissenschaftliche Medicin, 1896; Fischer, Virchow's Archiv, 1903, Band clxxii.; Fleiner, Berliner Klinische Wochenschrift,

1894, vol. xxxi., pp. 5 and 38; Flexner, University of Pennsylvania Medical Bulletin, 1902, p. 390; Guillon, Gazette Hebdomadaire de Medecine, 1898, p. 84; Herxheimer, Orth's Festschrift; Herzog, Virchow's Archiv, Band clxviii.; Hesse, Münchener Medicinische Wochenschrift, 1902, p. 1449; Hirschfeld, Centralblatt für Medicinische Wissenschaften, 1890, pp. 10 and 11; Hoppe-Seyler, Deutsches Archiv für Klinische Medicin, 1893, vol. iii., p. 171; Laguesse and De la Roche, Comptes Rendus de la Société de Biologie, vol. liv., p. 864; Nebelthau, Archiv für Experimentelle Pathologie, 1901, Band xlvi., p. 385; Sauerbeck, Virchow's Archiv, 1904, Band clxxvii., p. 1; Schultze, Archiv für Mikroskopische Anatomie, 1900, Band lvi.; Umber, Zeitschrift für Klinische Medicin, 1900, Band xxxix., p. 13; Wille, Deutsches Archiv für Klinische Medicin, 1899, Nos. 5 and 6.

ABSTRACT OF

The Hunterian Lectures

ON

THE DISSEMINATION OF MAMMARY CARCINOMA.

Delivered before the Royal College of Surgeons of England on March 13th, 15th, and 17th, 1905,

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LECTURE II.[1]

Delivered on March 15th.

MR. PRESIDENT AND GENTLEMEN,—In my first lecture I laid before you the clinical and statistical evidence for my belief that cancer of the breast spreads in the parietes centrifugally and by continuity and that it probably spreads primarily in the plane of the deep fascia where the principal parietal lymphatic plexus is situated by actually growing along (permeating) the vessels of this plexus. The object of this lecture is to place before you the histological proofs for the theory thus provisionally outlined. To obtain these proofs it was necessary to examine the parietal tissues over a wide area, preferably by means of long radial sections extending in one or more directions from the primary neoplasm. This has been done with some completeness in three cases and partially in two others. I would like in passing to express the opinion that there is much yet to be done in morbid histology by the application of microscopic methods on a macroscopic scale. Each of the strips examined, which varied in length from two to about 18 inches and included skin, fat, fascia, and a layer of the underlying muscle, was divided by transverse cuts into a series of blocks of tissue and the proximal end of each block was carefully marked. The blocks were transferred in order to numbered bottles and sectioned by the paraffin method. The corresponding longitudinal series of sections gave a view of the whole length of the original strip. In order to examine the strip in its breadth as well a series of sections was in one of the cases mounted from each block. From this case about 500 sections were prepared and examined. I propose first to describe somewhat fully a case in which the various processes were most easily traceable, next to give a general description of those processes, and lastly, by a recital of the other cases, to show how, under widely divergent appearances, the working of these processes may be traced.

CASE 1.—The patient was aged 66 years. On the thorax in the region of the right breast was an ulcerated tumour as large as an orange. It was surrounded by isolated hard nodules which extended to the right axilla, where there was a mass of growth causing œdema of the arm. Similar nodules were present in the left breast and there were a few small ones on the skin between the breasts. Elsewhere the skin was free from nodules. There were no enlarged glands in the right axilla. The right supraclavicular glands were palpable. The sternum and three of the right ribs were infiltrated and the growth had penetrated to the right pleura which showed numerous nodules, especially on its parietal portion. The right lung presented a few nodules; the left one also but to a less extent. The liver presented several superficial nodules on its surface near the round ligament. The other abdominal organs were normal. The parietal strip examined was a median ventral one, extending from 25 millimetres below the suprasternal notch to a point 60 millimetres above the umbilicus. A slice of this strip three millimetres thick was stained and rendered translucent by a method which I have elsewhere described.[2] At the level of the breast the subcutaneous tissues showed dense nodular infiltration with growth and there only could invasion of the skin be seen. The underlying pectoralis was partially infiltrated by growth. As the strip was traced downwards, a line of about four nodules was seen lying upon the upper two inches of the anterior layer of the rectus sheath. The skin over these nodules appeared normal. In its upper part the strip was defective, and owing to the absence from it of fascia and muscle the upward course of the growth could not be traced. Examination with the naked eye thus showed that the growth was spreading along the plane of the deep fascia, not along the skin, and that the growth had spread downwards beyond the lower limit of the pectoral fascia and over the abdominal wall. In order to determine the nature and extent of the fascial spread a parallel strip was microscopically examined along its whole length.

Appearances seen in a radial section extending upwards from just above the umbilicus to the level of the primary growth.—The microscopic growing edge of the cancer reached to a point about one and a half inches below the ensiform cartilage. Below this point the tissues were proved to be entirely free from growth down to the lower end of the strip, while above it they showed foci of growth at short and fairly regular intervals, varying from one millimetre or less up to five millimetres. The lower limit of the pectoral fascia had not in any way checked the downward extension of the growth. At one point the cancer had penetrated the anterior layer of the rectus sheath nearly to its deep surface. Had the section passed through the linea alba at the same level cancer cells would doubtless have been seen in ominous proximity to the subperitoneal fat and the peritoneum (see Lecture III.). For a breadth of over 30 millimetres the microscopic margin of the carcinoma lay exclusively in the plane where the deep fascia joined the overlying fat. Clearly, therefore, it was extending primarily along this layer. At the extreme growing margin the cancerous foci took the form of cross sections of lymphatic vessels belonging to the deep fascial lymphatic plexus filled but not distended by the growth of cancer along them. The cancer cells were in an active condition. There was no sign of inflammatory reaction to the cancerous invasion. Higher up—i.e., nearer to the primary growth—the lymphatics showed increasing distension by the growing cancer cells, which themselves were undergoing degeneration as the result of the increased pressure produced by their proliferation. Around the invaded lymphatics were seen collections of round cells. Still higher up were seen spaces containing cancer cells and a few red blood corpuscles. It will be shown later that these spaces were formed by the rupture of the distended lymphatics. Still higher cancer seemed to have almost disappeared from the deep fascia, but on close examination permeated and ruptured lymphatics were seen in process of obliteration by an inflammatory reaction which ended in the formation of fibrous tissue. The slender cylinders of cancer cells were finally strangled by the contracting fibrous tissue. Here also for the first time the adjoining layers, the skin and muscle, showed commencing nodular invasion. As the primary growth was approached the deposits became more massive and numerous. In this region the macroscopic nodules appeared isolated one from the other and the process of permeation could not clearly be made out.

Before describing the other cases I have examined I propose to anticipate some of the evidence and to give a general description of the pathological processes seen in the parietal spread of cancer of the breast.

PERMEATION AND ITS SEQUELS.

The growth of cancer along lymphatic vessels is, no doubt, simply the result of that same tendency to take the direction of least resistance, which on the surface of the body

[1] An abstract of Lecture I. was published in THE LANCET of April 8th, 1905, p. 909.

[2] Archives of the Middlesex Hospital, vol. iii., 1904.

manifests itself in fungation. By preference the process seems to traverse vessels of not less than 40 or 50 μ in diameter, avoiding for a time those of smaller calibre and therefore of higher resistance. The trunk lymphatics also, as Stiles's researches have shown, remain free from growth until a late period, but for a different reason. In them the lymph stream is strong enough to sweep away as emboli any cancer cells which gain an entrance until, in a late stage, their outlet is dammed by growth in the glands or by external pressure. This, no doubt, is the reason why cancer of the thoracic duct is so rare. Nevertheless, when cancer of the thoracic duct does occur, the duct and its tributaries are so obviously converted into solid cords of growth[3] that the process of permeation can be followed by the naked eye. When the tissues are transparent, as is the case with the thin pleura and peritoneum, permeation can be seen without the aid of the microscope even in very minute lymphatics. In less favourable situations—as, for instance, in the parietal tissues—permeation cannot be directly observed and has to be inferred from sections. A permeated lymphatic plexus in vertical section would appear as a series of dots at intervals corresponding to the diameter of its meshes, each dot being a section of a cancer-filled lymphatic. The appearances in the radial section just described must, therefore, indicate permeation of the fascial lymphatic plexus.

One of the main difficulties in the acceptance of the permeation theory of dissemination is that microscopic evidence of it is so often wanting. But the reason of this is not far to seek. I find that a lymphatic along which cancer has grown does not persist indefinitely in that condition until the death of the patient affords an opportunity for its examination. A series of changes occurs in the permeated lymphatic which usually ends in its destruction. I shall refer to this process as perilymphatic fibrosis.

[The lecturer here showed a number of photo-micrographs illustrating the various stages of permeation and perilymphatic fibrosis, which will appear in the forthcoming volume of the "Archives of the Middlesex Hospital."]

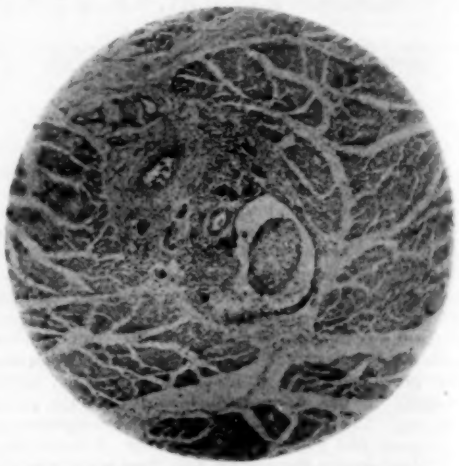
PERILYMPHATIC FIBROSIS.

It has already been stated that while cancer cells in blood cause clotting, cancer cells in lymph excite no such thrombotic reaction. Nor in the tissues round a permeated lymphatic is there at first any sign of reaction. Instead of being filled by lymph the lymphatic is filled by a cylinder of cancer cells but no other changes are visible. Soon, however, owing to the elasticity of the lymphatic and to the continued proliferation of the cancer cells within it the vessel is distended to several times its normal diameter. This distension is followed by a process of inflammatory fibrosis around the invaded lymphatic, analogous to that which on a large scale follows the prolonged distension of a hollow viscus, such, for instance, as the gall-bladder or the Fallopian tube. The commencement of this process is heralded by the appearance of round cells, apparently emigrated leucocytes, in the perilymphatic tissues. By this time the cancer cells themselves have undergone certain changes due to the harmful pressure resulting from their own proliferation. These changes are most marked in the centre of the mass of cells. Often a single layer of well-preserved cells forms a gland-like lining within the lymphatic endothelium, while all the central cancer cells are swollen, hyaline, refractile, and have lost their tinctorial affinity. Although, owing to the elasticity of its wall, a lymphatic vessel is for a time simply stretched and distended by the mass of cancer cells its powers of resistance are not unlimited. Sooner or later the permeated lymphatic ruptures (see Figure) and the cancer cells within it are set free to invade the surrounding tissues. The rupture frequently causes slight traumatic hæmorrhage into the space inclosing the cancer cells, which are now contained on one side by the endothelium of the ruptured lymphatic, and on the other side by a false capsule formed by the perilymphatic tissues.

At first sight it would appear that all obstacles to the interstitial spread of cancer in the perilymphatic tissues are now removed. But for two reasons this is not the case. In the first place, the cancer cells thus set free are frequently degenerate and unviable as the result of the pressure to which they have been subjected. In the second place, the rupture of a permeated lymphatic greatly intensifies the inflammatory reaction which was already present in the perilymphatic tissues. Round cells collect in large numbers around the liberated group of cancer cells and infiltrate its periphery. Round-celled infiltration is followed by the formation of granulation tissue and by the appearance of newly formed capillaries. A definite capsule of young fibrous tissue is soon seen inclosing the mass of cancer cells, and although the latter may for a time increase and multiply within their fibrous capsule, they are ultimately strangled by its contraction or destroyed by phagocytosis. Finally the permeated lymphatic is replaced by a slender thread of fibrous tissue not clearly distinguishable from a nerve except by special methods of staining. Perilymphatic fibrosis is obviously a curative process, but unfortunately, from this point of view, it has certain defects.

THE FORMATION OF NODULES.

It has been stated that at first permeation spreads only along the lymphatics of medium size. But in its later stages, owing to hyper-distension by cancer cells and to contraction of the perilymphatic fibrous capsule, the pressure within the permeated lymphatic is increased to such an extent that cancer cells are by this pressure and by their own proliferative power forced in a continuous line along the smaller branch lymphatics. Each of these branch lymphatics takes origin from a bundle of lymphatic capillaries which are in their turn invaded. In favourable



The illustration shows the rupture of a permeated and distended intramuscular lymphatic. Slight hæmorrhage has in consequence occurred and there is much round-celled infiltration around the rupture. Near to the lymphatic are a normal artery and vein. The extension of permeation along the small tributaries of the ruptured lymphatic can be seen.

circumstances cancer cells still viable may in this way reach the extreme periphery of the lymphatic system. The wall of the lymphatic capillaries consists simply of a layer of endothelium and can offer no effective resistance to internal pressure. Consequently, before inflammatory reaction can occur there is interstitial invasion of the tissues and a localised nodule is formed, the limits of which correspond at first, according to my observations, with those of the capillary area into which permeation has extended. Permeation of the smallest lymphatics is best seen in muscle. At first lines of cancer cells are seen running between normal muscle fibres. Later the muscle fibres themselves may be seen occupied by cancer cells, while the permeated lymphatics have been replaced by fibrous bands. Of course, this is not the only way in which nodules may be formed. Along the course of a medium-sized lymphatic, for instance, fibrosis may fail, if only at isolated points, and macroscopic nodules may in consequence be formed. Not infrequently such nodules are seen upon the deep fascia.

THE LATENT PERIOD OF THE REACTION TO PERMEATION.

Since a curative process of perilymphatic fibrosis is one of the results of permeation, the latter process might conceivably thereby be arrested. And perhaps this does sometimes happen when the reproductive power of the cancer cells is relatively small or when they cohere strongly

[3] *Cf.* W. T. Hillier: Carcinoma of the Thoracic Duct, Transactions of the Pathological Society, 1903, p. 153.

together. But since perilymphatic fibrosis only occurs in the late stage of permeation, it is usually absent at the microscopic growing edge of the carcinoma, which continues to advance. The invading cancer cells manage to keep always just ahead of the pursuing inflammatory reaction. Dr. W. S. Lazarus-Barlow[4] has pointed out that the process of stroma formation fails in a similar way to check the interstitial advance of a primary carcinoma, because it is absent at the actual infiltrating edge.

CONTINUITY OF THE SECONDARY DEPOSITS WITH THE PRIMARY GROWTH.

It appears that the parietal metastases of cancer of the breast, however remotely situated, arise in genetic continuity with the primary growth. But the evidence of this original continuity is destroyed by the process of perilymphatic fibrosis, which obliterates the permeated lymphatics that originally formed the lines of communication. Probably metastases in the lymphatic glands are the only parietal metastases which originate from lymphatic embolism.

THE ZONAL ARRANGEMENT OF MAMMARY CARCINOMA IN THE PARIETES.

Although all the parietal secondary nodules may be regarded as outlying portions of the primary growth it is convenient to retain the term "primary growth" for the region of interstitial infiltration around the original focus. Beyond the boundary of this region three distinct zones may more or less clearly be recognised. In absolute and relative extent they vary enormously in different cases, and of course in different stages of the same case. Those zones are as follows.

(*a*) *Zone of isolated nodules.*—This zone immediately surrounds the primary growth. In it isolated or confluent nodules are present in the various layers of the parietes. The intervening permeated lymphatics have partially or completely been destroyed by perilymphatic fibrosis.

(*b*) *Zone of active perilymphatic fibrosis.*—In this zone permeated lymphatics are recognisable in the deep fascia undergoing the various stages of fibrous obliteration. Nodules are commencing to form in the adjacent layers. Beyond this zone the process of permeation, following the line of least resistance, is usually found only in the deep fascia, where the main lymphatic plexus is situated.

(*c*) *Zone of fascial permeation.*—This is subdivisible into a proximal and a peripheral zone. In the proximal portion of this zone the permeated and distended lymphatics of the deep fascia are surrounded by perivascular collections of leucocytes. Permeation has not to any extent invaded the small tributaries of the fascial plexus and cancer is found only in the deep fascia and in the immediately overlying subcutaneous fat. In the peripheral portion of the zone which forms the microscopic growing edge the permeated fascial lymphatics have not yet been distended by the cancer cells within them and no excess of leucocytes is present either around the permeated lymphatics or in the blood-vessels near them. Inflammatory reaction to the cancerous invasion is thus entirely absent at the growing margin.

Case 1 was an especially favourable one for the microscopic study of dissemination in the parietes. Permeation was proceeding fairly rapidly and hence the zone in which it occurred was a wide and well-marked one. Visceral metastases had killed the patient before the area of extension had become unmanageably large. In the next case I shall place before you the process of permeation was slow and the zone of permeation consequently very narrow. The survival of the patient for a long period allowed the zones of isolated nodules and of perilymphatic fibrosis to reach a considerable width. The later stages of fibrosis were consequently better seen than in Case 1.

CASE 2.—The patient was aged 73 years. The right side of the chest presented a cancerous ulcer as large as a man's hand, extending from the second to the sixth rib, to the anterior fold of the axilla, and to the margin of the sternum. There were metastases in the right and the left axillary and in the right supraclavicular glands, and in the left breast. Beneath the primary growth the ribs and the right pleura were infiltrated. Posteriorly there were some small scattered growths on the parietal pleura, especially in its lower part. In the abdominal cavity there was a malignant deposit on the anterior border of the right lobe of the liver and one portal gland was cancerous. Two radial strips were examined running in different directions from the edge of the ulcerated growth. To the naked eye the proximal portion of the strips presented a line of confluent nodules along the junction of the dermis with the subcutaneous fat. Further on the nodules became smaller, with intervening areas of apparently normal skin. At the distal end of the strips the skin looked normal. Along the whole length of both strips no nodules were present in the plane of the deep fascia. So far the evidence was strongly in favour of the accepted view that cancer of the breast frequently spreads along the skin in the plane of the (hypothetical) deep cutaneous plexus. Histological examination of the strips showed the following points:—

Strip A, extending for 90 millimetres from the ulcerated edge down the right arm.—The strip was divided into six blocks, four of which were cut in series. About 250 sections from the strip were examined.

Skin.—Nodular and interstitial invasion was present more or less continuously but with diminishing intensity along the proximal 76 millimetres of the strip. Beyond this point there were two minute isolated nodules at the deep aspect of the dermis. The more remote of these two nodules was situated 84 millimetres along the strip one millimetre beyond the furthest point of invasion of the deep fascia. An oblique fibrous septum containing permeated lymphatics connected this nodule with a point on the deep fascia *proximal* to the narrow zone of fascial permeation now to be described.

Deep fascia.—In the proximal 45 millimetres of its length the deep fascia was entirely free from cancer. Several fibrous areas (fibrosed lymphatics) were seen lying near blood-vessels. At 45·5 millimetres from the proximal end of the strip was an oval area of concentrically arranged fibrous tissue inclosing a few degenerate cancer cells. Beyond this point the strip was again free from cancer as far as 63·5 millimetres. Here was seen a lymphatic about 100μ in diameter, filled by cancer cells which had ruptured its walls at one point. In another section of the series the lymphatic was replaced by two smaller ones and had evidently bifurcated. We now come into the zone of permeation and cancerous lymphatics are seen at short intervals. At 72·5, 76, 77, 78, 79, 81, and 83 millimetres permeated lymphatics of gradually diminishing size were present upon the deep fascia. From 83 millimetres to the end of the strip the fascia was free from cancerous invasion. Thus the zone of fascial permeation was here about 11 millimetres wide.

Muscle.—Along the whole length of the strip the muscle had escaped invasion.

On the centrifugal hypothesis the appearances in any two radial sections of the parietal tissues around the primary growth should be approximately alike. Strip B will show us whether this is in fact the case.

Strip B, extending for 83 millimetres from the ulcerated edge downwards and backwards into the loin across the lower ribs and lumbar fascia.—The strip was divided into seven blocks, most of which were cut serially. Over 200 sections from the strip were examined.

Skin.—The appearances in the skin were similar to those found in Strip A. Cancerous invasion was present as far as a point 49 millimetres from the proximal end—i.e., for the same distance as in the deep fascia. From 0 to 36 millimetres the skin showed nodular or interstitial growth more or less continuously. From 36 to 49 millimetres only two minute skin nodules were seen and these were not present in all the sections taken from this particular block.

Deep fascia.—In Strip B two strong layers of fascia, separated by a thin layer of fat, were present over the muscles. Cancer foci were found chiefly on the more superficial of these layers. Cancer was first met with nine millimetres along the strip where a circular mass of nucleated fibrous tissue, inclosing in its meshes a few degenerate cancer cells, was found. It was about 300μ in diameter and lay at the point of junction of a fibrous septum with the deep fascia. Above this fibrous septum ran into the "tail" of a skin nodule. One millimetre further along the strip was a similar fibrous area, 600μ in diameter, containing a large number of degenerate cancer cells. Fibrosis was less advanced than at the preceding focus and a large number of round cells were still present in the organising fibrous tissue. At the other end of the series of sections derived from this particular block the same lymphatic was seen as a solid cord of fibrous tissue, only 300μ in diameter, containing newly-formed capillaries and including only a few ghosts of cancer

[4] Lazarus-Barlow: Text-book on General or Experimental Pathology, second edition, p. 515.

cells in the last stages of degeneration. Thus certain stages of perilymphatic fibrosis were traced *at different points along the length of the same lymphatic*. The two fascial foci of cancer just described were the only ones present along the proximal 25 millimetres of the strip. Beyond this point we leave the zone of perilymphatic fibrosis and enter that of permeation. Permeated lymphatics are now found at short intervals. They are present at 28, 29, 31, 35, 35·5, 38, 39, 43·5 millimetres, and inconstantly (in the series of sections from this block) at 49 millimetres. The zone of permeation at this point was thus about 21 millimetres wide. Distension and rupture of the permeated lymphatics are visible towards the proximal border of the zone, while towards its distal border the lymphatics become smaller, since they are filled but not yet distended by the cancer cells. From 49 millimetres to its termination 83 millimetres from the edge of the ulcerated growth all the layers of the parietes were entirely free from growth. In particular a series of sections taken from the block immediately beyond the microscopically determined growing edge was entirely free from cancer.

Muscle.—The muscle has escaped invasion except at one point 36 millimetres from the proximal end of the strip. Here a small permeated lymphatic can be traced in longitudinal section for a long way down into the muscle. Since the parietes here are quite thin cancer might thus invade the perirenal fat and reach the lumbar glands (*cf.* Lecture III.).

The outstanding fact which emerged from the comparison of those two radial sections of the parietes was that in their proximal portion permeated lymphatics had disappeared from the deep fascia and that further from the growth an advancing edge of fascial permeation was present. These two radii were taken in random directions from the primary neoplasm and there is no reason to doubt that radial sections in any other directions would have given similar results. If this be admitted the existence of an annular area of permeation surrounding the growth at some distance from its macroscopic edge must be taken as proved. Permeation was absent over a wide zone, intervening between the zone of permeation and the primary growth. But that permeation had been present in this region, and passing beyond it had given place to perilymphatic fibrosis, was conclusively shown at a few points where all the stages of the metamorphosis could be traced. In Case 2 the three zones so clearly seen in Case 1 are foreshortened and confused but still recognisable. Owing to the absence of nodule formation in the layers adjoining the deep fascia, the zone of active perilymphatic fibrosis is better seen than in Case 1. But the most important new link in the chain of evidence was that the various stages of perilymphatic fibrosis were shown not in different lymphatics but at successive points along the length of the same lymphatic.

One difficulty has still to be met. In some sections invasion of the skin had extended slightly beyond fascial invasion and it may be said that cancer was extending along the skin and only secondarily extending from the skin to the deep fascia. The explanation is simple. Some of the fibrous septa along which permeation extended to the skin from the zone of perilymphatic fibrosis ran obliquely in a distal direction to a point on the skin beyond the narrow advancing edge of fascial permeation which formed the true growing edge of the cancer.

[The lecturer next described the histological results derived from Cases 3 and 4. These cases, though less completely examined, confirmed in general outline and in some respects extended the conclusions reached from Cases 1 and 2. He continued:—]

We have now studied cases in which parietal extension was moderately rapid and cases in which it was slow. In the case now to be described parietal dissemination was very rapid and had reached an extreme degree.

CASE 5.—Six months before death the patient first noticed a lump in the left breast. Subcutaneous nodules soon appeared, at first near the breast. A fortnight before death they were scattered universally, though irregularly, over the whole body except upon the distal portions of the arms and upon the lower extremities. At death nodules were present on both thighs as far as six inches below the anterior superior spine of the ilium. In this case, therefore, the clinical evidence for centrifugal spread appeared conclusive and an increase in the size of the invasion circle was directly observed during the last fortnight of life. The histological characters of the growth were peculiar. Its cells were of moderate and uniform size with round and vesicular nuclei and displayed a marked tendency to vacuolation and degeneration. The growth was classified as an endothelioma. The following parietal strips were removed and examined histologically along their whole length: (1) from the right acromion down the right arm to a point six inches above the wrist; (2) a coronal strip of the scalp from the vertex to the ear; and (3) a median ventral strip from the chin to the pubes. In these strips numerous isolated nodules were found, on the one hand in the subcutaneous fat and on the other hand in the muscle. The deep fascia was nowhere found permeated but it presented at some points fibrous areas which were probably fibrosed lymphatics but which possibly represented nerves. The skin had almost everywhere escaped invasion. No sign of invasion of the blood-vessels was seen. It could be made out with some probability that the muscles were first invaded on their superficial aspect, for the two youngest muscular foci were situated just beneath the deep fascia. Even the negative results of this case, which cannot in any case outweigh the positive evidence of Cases 1 to 4, are best explained by the theory of permeation. I am not aware of any theory but that of permeation which will explain the centrifugal extension so clearly manifested in this case by the clinical evidence. And as regards the microscopical evidence, it is at least possible that the strips examined, long though they were, failed to pass beyond the zone of isolated nodules into the outlying zones of active fibrosis and of permeation.

PARIETAL DISSEMINATION A SERPIGINOUS PROCESS.

The general resemblance between the mode of spread of cancer of the breast in the parietes and the mode of spread of certain annular and serpiginous forms of skin disease cannot escape notice. But the spreading ring of cancerous permeation usually leaves in its track here and there isolated nodular foci which give rise to macroscopic nodules. It is probable, however, that this is by no means invariably the case,—that perilymphatic fibrosis, while unable to overtake the spreading ring of fascial permeation, may be successful in preventing nodular invasion of the adjoining layers. Possibly, too, the ring of permeation might die out at some portion of its circumference and continue to advance only as the arc of a circle. In such cases years of apparent health might in the end be followed by recrudescence at some remote vulnerable point, towards which in the meantime the process of permeation had steadily been creeping in a latent and microscopic form. It appears to me that permeation thus affords a rational explanation of the unsolved mystery of late recurrence.

THE "CURE" OF CANCER.

BY EDMUND OWEN, F.R.C.S. ENG.,
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Is a surgeon ever justified in claiming that he has *cured* a patient of cancer?

A surgeon may truly say that he has cured a person of a broken thigh-bone, or of an abscess in the hand, for by treatment he has relieved him of his trouble once and for all. But with cancer it is different. For a patient with cancer the surgeon may promise that he will "do" his "best"; but more than this he must not, cannot promise. And to "do his best" he makes a wide sweep of the growth with his knife, getting so far beyond it, indeed, that he may well hope and believe that, together with the tumour, he has taken in every cancer-germ. But, notwithstanding his wide sweep, he can never be sure that none of these germs had passed beyond it. And a cancer-germ adrift in the lymphatic stream is like a message thrown out to sea in a bottle: it may be found years afterwards—goodness only knows when or where.

In an almost pardonable wish to show forth the results of his operative-work in an attractive form, the surgeon is sometimes tempted to set up for himself a "time-limit," and then to say, "If after operation there is no sign of return of cancer in any part of the body within this period, I shall count the case as *cured*." After all, this time-limit of his is but arbitrary. One surgeon may fix for himself a ten-years' limit; whilst another who is, perhaps, more sanguine, or who is possessed by a greater natural anxiety to show pleasant results, makes his a three-years' limit.

And if *three years*, why not *three months?* But could a surgeon who looks at facts, rather than at figures and fancies, regard the three-year group of operations-cases or even the ten-year group as *cures?* I think not. It may be much more than ten years before that little mass of drifting cancer-cells is, by chance, found cast up in an ovary or in the uterus. And if when the unwelcome discovery was made the *Table of Results* which counted that particular case amongst the *Cures* had not been already published, an important change in its appearance would have reluctantly to be made.

Far be it from me to write as one without hope with regard to the cure of cancer; but neither aspirations nor statistics can alter plain pathological facts. And it seems to me that just now Surgery (with, perhaps, a becoming wish to remove attention from her red-stained apron, and to show herself less unpleasing to the public eye) is growing a little too free in the use of the word *cure* in connexion with the treatment of cancer. Surgery should remain cold and unemotional, and, though full of hope, should not go in advance of facts. And one fact is this, that at present it is beyond her power to undertake to *cure* cancer—neither can *x*-rays nor Finsen's light, nor can any drug or nostrum taken internally or applied locally, do this. Treatment is, unfortunately, not the same thing as cure, and the most effectual treatment for cancer is still removal by the knife. Certainly for anything more serious than a small surface-growth, no measure is so trustworthy. And the great advantage which this method has over all others is that it enables the surgeon to take away also the neighbouring lymphatics, and the outlying lymphatic glands. It is by the greater freedom and thoroughness of modern methods of operating, that Surgery has of late made such great advances in the treatment of the disease. That she has advanced, and is still advancing, is beyond dispute.

And though Surgery is still unable to lay claim to curing cancer, operation, if done early and freely, and repeated again and again if need be, can, in certain cases, bring lasting relief. The following report serves as a good example of this ability:—

In May, 1876, Sir William (then Dr.) Broadbent sent to me a domestic servant with cancer of the right breast. And in doing so he asked me, if I thought fit, to try the effect upon the growth of injections of acetic acid—a method of treatment in which he had formerly been much interested. The patient, Mrs. ——, was 55 years old, a widow, who had never borne a child. She said that she had noticed the lump in the breast for about three months, and that for a long time before this she had been much troubled by feelings of pin-pricking there. The lump was very hard: there could be no mistake as to its nature. I very willingly carried out Dr. Broadbent's suggestion, making injections at six different times. But finding that the tumour was steadily getting larger, I freely removed the breast with the knife in the following July. After the operation I cut the tumour across: it was as if one were drawing the knife through an unripe pear.

Fifteen months later, namely, in October, 1877, she came up again because a hard lump of the size of a large walnut had grown upon the scar. This was freely removed by the knife, but very soon afterwards another growth appeared, which I dealt with in the same way in February, 1878. In December, 1879, she was again in trouble with the scar, so I once more operated by a clean sweep; and as at this time there were some enlarged glands in the arm-pit, I did a more thorough operation, clearing away all the axillary lymphatics. This was the last operation done upon her, and soon afterwards she asked me to fill up a schedule so that she might become a pensioner at the Royal Hospital for Incurables. This was rather more than a quarter of a century ago, and she has ever since been happily drawing her pension.

In answer to a letter from me, she wrote on March 24th, 1905, as follows: "You will be pleased to hear that I am wonderfully well and active, in my 84th year. Just now I am busy knitting night-socks for a kind lady."

If I kept statistics of operative work—a dangerous thing for some of us—I think that I should be almost tempted to claim this particular case as a cure of cancer by operation. And no one, I believe, would accuse me of undue haste in reporting the case or of arrogance in making the claim. I have other cheering cases which, were I a surgical statistician with a time-limit, I might be inclined to place with it But, as it is, I shall let Mrs. ——'s case stand by itself, and shall content myself with saying that in the other cases there is at present "no sign of return"—and this, in my opinion, is as much as a surgeon is ever justified in claiming as the best result of his treatment of cancer. For, unfortunately, the "cure" of cancer seems still to be as far off as ever.

Great Cumberland-place, W.

CYLLIN INHALANT.

By E. KLEIN, M.D., F.R.S.,
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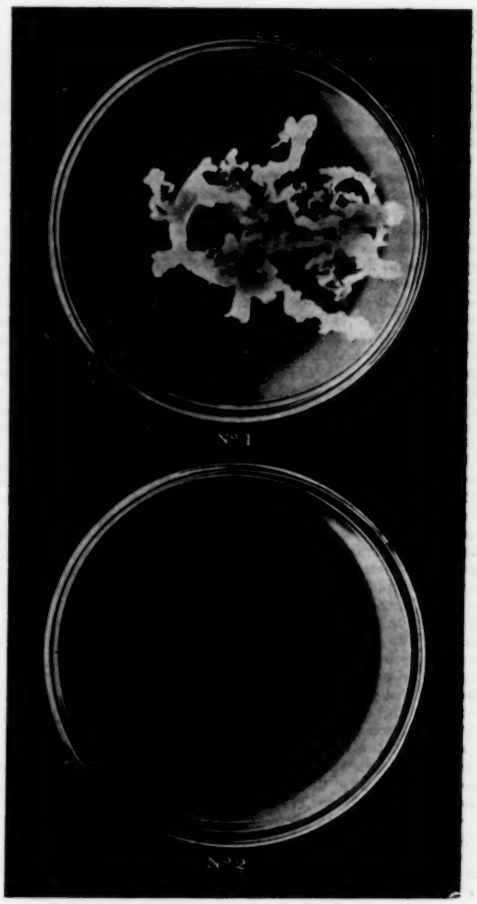
CONSIDERING the importance attaching to the presence of micro-organisms such as the staphylococcus pyogenes aureus and the streptococcus pyogenes in the purulent contents of the bronchial branches in pulmonary tuberculosis it was interesting to ascertain whether the new drug termed "cyllin inhalant" (which is not to be confused with the ordinary cyllin) has any germicidal influence on the above microbes. Experiments were therefore made with the staphylococcus pyogenes aureus in the following manner. Two surface agar plates were infected in the same manner



and at the same time from the same active culture. One of the plates was kept as a control, while the other was operated upon in a Bulloch chamber with the "cyllin inhalant" for ten minutes, after which period of time it was left in the closed chamber exposed to the residual cyllinised air for one hour. The plate was then taken out and placed with the control

plate in the incubator. After two days' incubation at 37° C. the control plate showed copious and normal growth (Illustration No. 1) of the staphylococcus pyogenes aureus, whereas the medicated plate (Illustration No. 2) remained quite free of growth. This interesting result, therefore, suggests the use of this new inhalant in combating the symbiotic action of the pus microbe in pulmonary tuberculosis.

St. Bartholomew's Hospital.

THE RELATIONSHIP BETWEEN DENTAL AND OTHER DISEASES.[1]

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IN venturing to offer a few remarks this evening on the relationship between dental and other diseases I do so with a considerable amount of diffidence because the whole matter has been treated in an exhaustive manner, not only by members of this society but by members of the medical profession. This is a many-sided subject, as wide as it is difficult, and I can only hope—as a dental surgeon speaking to fellow practitioners—to add my mite by falling back upon experience which we are told will even make fools wise.

What do we mean by disease? Is it possible to define it? Disorder in the living body might be a brief definition; but we must go further than that. This body is made up of myriads of smaller bodies—described as cells—each possessed of its own living entity, doing its own work, exercising its own function; whether that be of nervous conductivity, muscular contraction, or glandular secretion; whether it be of circulating in the fluids of the tissues or helping to build up the framework of our bones and teeth. Having one common ancestor their intimate relationship cannot be denied.

To the disturbance or disorder in this marvellous organism many sciences are called into consultation and among them may be found biology, physiology, chemistry, and bacteriology. If we inquire of these sciences, "What is disease?" one will tell us it is a change in the structure and functions of the cells; another may inform us that it is truly a chemical change in the tissues; and yet again, that all this disorder is due to the invasion of our cells by micro-organisms. To all these statements we may willingly assent, but do not let us forget that whatever our feelings may be toward the pathogenic bacteria, micro-organisms are our great benefactors. They serve us for useful purposes in the bread we eat, in the wine and water we drink, in the air we breathe. Without their aid our ground would be unfit for the crops we grow. They are the universal scavengers both within and without this body of ours, and, curiously enough, we are daily using their own productions in order to bring about immunity from the toxins of their fellows. So we may say with truth that "disease is the non-adaptability of man to his environment." This seems to be a generalisation of our great philosopher Spencer (though I cannot trace it); but let us come closer home.

Huxley, in one of his lectures, makes this terse statement: "The living body is a mechanism, the proper working of which we term health, its disturbance, disease; its stoppage, death." Most diseases of the human body are brought to our notice by the symptoms which are rendered obvious to the senses of sight, hearing, and touch. To us as dental surgeons pain and swelling in the facial region or an alteration in the form and colour of dental tissue recalls to the mind a structural change with which we are at once familiar; but how different it is with the physician when called upon to define this disturbance which may have for its chief manifestations constant nausea and vomiting, an irregular action of the heart, with occasional fainting fits, or again, a general lassitude with loss of appetite and a dusky pallor of the skin. These disordered functions are perhaps the only signs he can consider and his path is beset with difficulty for there may be many reasons why they may arise. It is a fact—of which we are well aware but just as likely to forget—that most of this living body of ours is hidden away from sight, and for this reason alone, among many, much of our intimate knowledge of diseases must for ever be shrouded in mystery. How fortunate then are we whose treatment is largely based upon what we can see.

Accepting as we do a kinship in structure how best may we establish it in disease? Shall we seek it in its manifestations, its causation, or its treatment? Perhaps in all? Shall we find it in childhood, in adolescence, or in adult life? In all. I propose, therefore, to ask your consideration for a short time to cases which are to be found in a children's hospital—cases which (though for the most part dental) are intimately associated with an important factor in the production of disease—viz., perverted or mal-nutrition. They are chosen simply as types from a large number and upon them I hope without wearying you to make such observations as may seem desirable.

CASE 1. *Alveolar abscess: lymphatic glands enlarged; suppuration extending from a temporary molar to a sound permanent molar.*—The patient, a boy, with dark complexion, aged six years, was admitted with a swollen cheek. The temperature was normal. The lymphatic glands were much enlarged in the neck on the right side. On examination the second temporary molar on the right side of the mandible was deeply carious; the six-year molar behind it was free from caries and freely moveable; pus was oozing out round the necks of both teeth. Ethyl chloride was administered and both teeth were removed. The distal root of the temporary molar was necrotic. The permanent molar—quite sound—with roots only half developed was floating in a bed of pus. The source of the trouble was evidently the temporary molar. Inflammatory products had found their way from it through the bone to the softer tissues of the developing molar roots, destroying them. The only analogous cases are those which one not infrequently finds in connexion with bicuspids where after the extraction of a septic temporary molar the bicuspid crown is found free, moveable, and surrounded by pus, its vitality entirely destroyed.

CASE 2. *Stomatitis.*—The patient was a girl with fair hair and pallid complexion, aged seven years. The breath was very foul. There was a free discharge on the pillow every night. On examination the lower temporary molars on the right side and the first temporary molar on the left were found to be deeply carious. The mucous membrane round the necks of the teeth had a necrotic margin and was deeply congested; that portion of the mucous membrane of the cheek which lay next to the teeth had patches of ulceration. Ethyl chloride was administered and the teeth were removed. A mixture of chlorate of potassium with cinchona bark was ordered, also one and a half pints of milk to be taken during the day with meals. In a fortnight the child was quite well.

CASE 3. *Eczema.*—The patient, a fair-haired boy, aged three years and 11 months, was admitted on Nov. 5th. He was pallid and anæmic; he screamed at night with pain. On examination there was a well-marked eczematous rash on the face, especially on the right side, with a few spots on the left side; the second temporary molar on each side of the mandible was deeply carious and the nerves were exposed. The tonsils were enlarged. The child snored at night. The mother stated that the boy had had the rash before, at three months and at three years. The boy could not eat. Both of these teeth were removed. One drachm three times a day of mistura ferri perchloridi was ordered. On Nov. 12th the rash was rapidly disappearing. There was no pain at night; he could eat with comfort. On the 19th the rash was gone and the patient was quite well.

CASE 4. *Defective teeth and improper diet.*—The patient was a fair-haired girl, aged two years and seven months. She was too ill to walk. On examining the mouth all the teeth were carious with the exception of three lower incisors and the left lower canine. The whole of the teeth in the upper jaw were sodden and level with the gums with the exception of the second molars. The mother said that this was her ninth child. She had had ten children; eight were living. She fed the child on bread and dripping, potatoes, and haricot beans, but no milk or meat. Ethyl chloride was administered and ten teeth were removed in two operations. A chlorate of potassium mixture with cinchona was given, a teaspoonful three times a day, and the mother was requested to give the child one pint of milk each day, a little meat, and no potatoes. In less than a month the child had gained eight pounds, was bright and cheerful, and running about.

CASE 5. *Malnutrition.*—The patient was a fair-haired boy, apparently well nourished, one year and nine months old.

[1] A paper read before the Odontological Society of Great Britain on Jan. 23rd, 1905.

The upper lip was much swollen. The child was feverish and fretful. The mother stated that the previous week "he could not see out of his right eye." On lifting the lip the upper incisors were seen to be necrotic, over the right lateral and central pus oozed freely into the mouth. Ethyl chloride was administered and these teeth were removed. The roots of these teeth were as dark as their crowns; each had at its apex a small abscess sac. Half the crowns of each tooth were gone. *No milk* had been given.

CASE 6.—The patient was a boy of dark complexion, aged one year and 11 months. He was thin and fretful. He was very restless and kept the mother awake at night. On examination the four upper incisors were carious to the gum line, also the first upper molar on each side was deeply carious. All these were removed. The child had been fed on bread-and-butter and tea, sometimes a little meat, but *no milk*.

Such cases are by no means rare. The early age of the patient, with the absence of proper nourishment, are the chief characteristics, with perhaps a voluntary statement on the mother's part that "the teeth came through decayed."

CASE 7. *Sinus in the mandible from a temporary tooth.*—The patient, a fair-haired child, aged three years and nine months, was admitted on Jan. 21st. She was very anæmic and had a discharge from the lower jaw. On examination the upper teeth were found to be all in good condition and free from caries. On the left side of the mandible were two carious molars; in connexion with the first was a small sinus on the gum from which pus was oozing. On the right side of the mandible there were no molar teeth; these had been removed two months before. There was considerable thickening of the bone and beneath the site of the second temporary molar outside the mandible was a sinus with a free discharge of pus. Inside there was also a small sinus on the gum from which pus was oozing. Chloroform was administered and the carious teeth on the left side were removed; on the right side a probe was passed through the jaw into the mouth; no necrosed bone or the remains of a tooth were felt. The mother stated that at 12 months the child had "large" glands beneath the jaw which were lanced. The child's ears were pierced at three years "to save her eyes." The father had been out of work since Christmas. The child's food consisted of condensed milk and water, tea, and bread-and-butter, but no *fresh milk* or *meat*. The external sinus was treated with boric lotion on lint. Mistura ferri perchloridi was prescribed. One pint of milk was ordered each day. The child was thus treated for four weeks. She was much better and had gained four pounds in weight. The mandible was almost normal, the swelling was gone, and there was very little discharge. On March 4th the face was much swollen. There was a free discharge of pus from the sinus externally and internally. The father was out of work and the child had no milk. A month later the child was quite well. The father had work, the child was having good food and plenty of milk. Both sinuses were healed and only an external scar remained. This case is an object lesson in *malnutrition*.

CASE 8. *Chorea.*—The patient, a girl of dark complexion, was admitted on March 19th, 1901. She had been ailing for four or five months. She had well-marked chorea. There were movements in the face, the hands, and the feet, chiefly on the right side; she could not sit still. She was very anæmic. The mother stated that the child had been under medical treatment since the commencement of the illness. She had never had rheumatism or bronchitis, but had complained of pains in her legs. For the past month she had been under the treatment of Dr. Soltau Fenwick, my colleague. The appetite was bad. On examination the patient had foul breath and several necrotic roots of temporary molars in the maxilla and the mandible. These were removed. On May 14th, though better, the patient would not sit still; the appetite was better. She had had toothache for two days. On examination the upper six-year molar was carious and the nerve was exposed. This was removed. On the 21st the patient was rather worse. The mouth was still in an unhealthy condition; the mucous membrane round the necks of the teeth was deeply congested; there was no ulceration. One teaspoonful of lime juice three times a day was ordered. On June 4th she was much better; the mouth was clean and healthy; there was little or no movement in the limbs now.

Chorea is generally associated with rheumatism. It is well known that the symptoms are more likely to arise in children of a neurotic type. The symptoms appear to lie dormant for a time and then to be set up by very trivial causes. Given a neurotic subject, any source of irritation may be cited as a contributory cause or as a means of keeping up the movements so typical of the disease. Though closely associated in its pathology with rheumatism this disorder appears to be the expression of a nervous system goaded to desperation by accumulated ills. Removal of one evil alone does not effect a cure. It is only as each one is sought out and removed that the symptoms disappear. That a fruitful source of irritation may be found in carious teeth is well illustrated by this case, one only of many.[2]

CASE 9. *Nervous affection of the mouth and the eyes.*—On April 16th, 1901, a fair-haired girl, nine years of age, was sent on to me by my colleague Dr. Fenwick, who had treated her with belladonna and bismuth. There were twitching of the eyes and mouth and a general restlessness of the body. The complaint was not chorea. The girl attended school regularly and was in the second standard. On examination the four upper temporary molars were found to be deeply carious. These were removed as she could not eat without pain. On the 23rd she was much better. A lower six-year molar was filled. The gums were deeply congested and purple round the necks of the upper and the lower incisors. The breath was foul. She was ordered oatmeal porridge for breakfast. A teaspoonful of lemon juice in water sweetened with a little sugar was given three times a day. On May 1st the patient was quite well. She had no nervous tremors; the gums were quite healthy and the breath was sweet.

CASE 10. *General malaise; nervous tremors.*—The patient was a boy, aged ten years and six months, and was very anæmic. He had been ailing for the past three months. He would wake up in the night in a fright, with nervous tremors. There was much discharge on the pillow. His diet was good—vegetables, bread and milk, and meat. On examination the boy had a clean tongue but foul breath. He had six carious temporary teeth and six carious permanent teeth. The four lower temporary molars were necrotic; in connexion with those on the left side were sinuses from which pus was oozing freely. These four teeth were removed and the permanent teeth were filled. Mistura ferri perchloridi and sulphate of magnesium were ordered. In a fortnight the patient was quite well. He had no nervous tremors. He could sleep well and his appetite was good.

CASE 11. *Lymphatic gland infection.*—The patient was a fair-haired boy, aged 10 years. The glands in his neck began to swell three months previously. These were inflamed and suppurating three weeks since; they were opened and were still discharging. On examination there was a suppurating submaxillary gland on the right side. There were a necrotic second temporary molar and the necrotic roots of a six-year molar on the right side of the mandible. No other source of irritation could be found. The tonsils and the pharynx were normal. The tooth and the roots were removed. A fortnight later the wound in the neck had ceased to discharge and only a scar remained.

In this case there was no evidence to prove that this patient was the subject of tuberculosis but I may remind you that one of the commonest sites for tubercle to develop in such glands is about the neck and beneath the lower jaw in those lymphatics which drain the surfaces of the head and face, and in fact those parts most liable to irritation. Mr. Edmund Owen, in a paper he read before this society,[3] directed attention to the fact that septic infection of the glands beneath the jaw frequently takes place in children through carious teeth. In reading over that paper and the discussion which followed I was struck with the fact that his opinions were received with a considerable amount of scepticism; but I have seen so much of it among the children of the poor that in private as well as hospital practice I never hesitate to sacrifice a tooth where the evidence of glandular irritation is present. It may be transitory, disappearing, as in this case, when the site of infection has been removed, but it may be tuberculous and spreading to other glands infect the whole body.

I have not attempted to divide these cases into local and constitutional because at best it is an arbitrary selection depending upon the severity of the symptoms. Two factors in the production of systemic disease stand out with considerable prominence in these cases, factors which, if I may

[2] Diseases of Children's Teeth, p. 156 et seq.
[3] Transactions of the Odontological Society, June, 1894.

say so, "play into each other's hands"—*defective dentition* and *malnutrition*.

The inability to masticate food in order to prepare it properly for gastric digestion, the constant nervous irritation caused by the exposure of one pulp chamber after another, the accumulation of putrid and decomposing material in cavities already the home of innumerable bacteria with the vitiated secretions, are in themselves sufficient to produce in the growing child a lowered vitality which renders him a ready prey to other disorders of the body. Add to all this a weakened bodily tissue in which heredity has played an important part, injudicious feeding in which ignorance of what is best and how to prepare it is always evident, with lack of cleanliness and much which tends to make life worth living even among the poorest, and you have some explanation of how dental disease may be related to other diseases. In the first few years of my attendance at the Evelina Hospital I was in the habit of trying the effect of constitutional methods alone where there were no immediate signs of dental pain—that is, by prescribing some medicine (nothing satisfied the mothers of these patients better) and lecturing the mothers on food and the way to prepare it—but it was a slow and wearying process and it had to be abandoned. Many of my colleagues do the same thing but a glance inside the children's mouths is sufficient to make them send the patients on.

In some of these cases mentioned this treatment has been tried and abandoned. *Active dental treatment is absolutely essential* and by the satisfactory results obtained you have a proof of how readily the young respond to treatment which goes to the source of trouble. There is another point which I must not fail to notice, though it has been incidentally referred to—viz., the accumulation of the products of putrefaction within the mouth. This is not only occasioned by teeth in varying stages of disintegration with the decomposing food around them but by marginal inflammation and ulceration of mucous membrane and gum tissue encircling the teeth—stomatitis in various forms. They may vary and there may be different forms according to the bacteria found in the discharges or vary according to the degree of severity; that, however, does not concern me now: it is the fact of stomatitis being present, and as a consequence of lowered vitality it is typical. There is a wound in the mouth, a foul discharge, with an extra recruiting ground for bacteria. Some of these may find their way into the blood directly; most are passed on to the stomach. In one case they produce all the symptoms of acute toxæmic poisoning, or should the gastric juice of the stomach fail to destroy them there is a slow toxæmia by absorption through the alimentary canal. In 1895 I referred to this subject and published two cases on the clinical side. Here is a typical one[4]:—

> A girl, aged 11. Admitted as a case of tubercular meningitis. Emaciation extreme, marked anæmia, constant vomiting. Breath most offensive. The child seemed almost moribund. The mouth was cleansed with pot. permang. for three days, then seven carious teeth were removed. She was given full diet. In eight weeks her weight increased from 59 pounds to 64 pounds. Seven months later she weighed 81 pounds.

This systemic poisoning from bacteria within the oral cavity Dr. W. Hunter describes as oral sepsis and at Oxford he reported a series of remarkable cases which were published with a full discussion[5] and papers were read by members of this society on the same subject. It is not my intention to enter into details but simply in passing to note the facts that in adult life one is constantly receiving evidence of modified forms of systemic poisoning due to neglected teeth and to utter a word of thankfulness that a subject so long neglected by our medical *confrères* is at last receiving some attention. Apart from the special susceptibility which some men show to the inroads of bacteria or the special malignancy of some bacteria upon apparently healthy individuals, as when typhoid fever or tubercle destroys the life of the finest soldier or athlete, it is evident that a body whose vitality is lowered forms the most prolific ground for their development. With children this is so evident that you may see the effects of dental disease upon their bodies in a hospital the like of which is not to be found in private practice, unless that practice is among the poorest. I believe that defective dentition needs oftentimes the association with other diseases in order to show those defects in the clearest light. The following will serve as an illustration.

[4] Diseases of Children's Teeth, p. 168.
[5] Brit. Med. Jour., Nov. 19th, 1904.

In THE LANCET of Oct. 29th, 1904, p. 1204, five cases of actinomycosis are recorded. The first three, entitled "A Clinical Study of Actinomycosis," are recorded by Dr. R. Knox. The patients were a girl, aged 18 years; a boy, aged 15 years, a brother of the girl; and another brother, aged 17 years. All these patients were suffering more or less in their general health. They were all sent to a farm in Perthshire where cattle had died from anthrax or some other disease. All had carious teeth with alveolar abscesses and glandular infection. In the first case throughout its course alveolar abscesses appeared in the mouth; pus from one of these was examined and contained the organism. Apparently the teeth were not treated by a dentist. This patient sank and died. In the second case the boy had some trouble with defective teeth with alveolar abscesses before his illness and these were treated by a dentist. This boy recovered. In the third case the boy was suffering from an abscess in the neck and he had adenoids. "His teeth were faulty; he had pyorrhœa alveolaris. A lower molar was extracted and had a saccular abscess at its roots." Pus from the tooth abscess and the one in the neck was examined; the mycelium with spores was found in pus from the tooth. The other faulty teeth were attended to, the adenoids were removed, and the patient made a good recovery.

The two cases reported from the Victoria Hospital were that of a girl, aged nine years, and that of a boy, aged ten years. The girl developed this disease in the skin of the chest and the boy in the skin of the abdomen. No site of infection was found but no mention whatever had been made of the condition of the children's mouths or their teeth. They were both improving in general health.

In conclusion, I have endeavoured to prove that the relationship between dental and other diseases is a very close and intimate one, as might have been expected. The defective dentition which we meet with in daily practice and among the poor as seen in hospital practice has the effect, broadly speaking, of lowering the nutrition of the body and by so doing opening wide channels by which other diseases are only too ready to find their way. We are face to face with the facts that dental disease is of all diseases the most prevalent among civilised communities; that we are as far from touching the cause of this defect as we ever were. We have in our own hands not only the means of alleviating much suffering but by systematic treatment improving the general health, especially of the young, who are in a sense the most important portion of the community.

Railway Approach, S.E.

A CASE OF
TETANUS SUCCESSFULLY TREATED WITH ANTITETANIC SERUM AND CURARE.

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MY excuse for reporting this case is that one similar to mine was published in THE LANCET of Sept. 17th, 1904, p. 831, which recovered under the same method of treatment as that adopted by me. The case that I refer to received notice in an excellent editorial article on the Treatment of Tetanus which appeared in THE LANCET of Oct. 15th, 1904, which every medical man should read, and to which I beg to pay tribute. Therefore I trust that the following notes may not be without interest.

A healthy youth, aged 17 years, while at his work, brick-making, on Sept. 1st, 1904, trod on a rusty nail which perforated his boot and punctured the sole of his foot. His mother informed me that the wound "gathered" and that she poulticed it. The foot was well in a few days and the boy did not give up his work. On the 9th he felt some stiffness of his neck and jaw and could not masticate his food properly. I saw the patient for the first time on the morning of the 12th. He was then in bed sweating profusely and was unable to move. His teeth were firmly clenched, the muscles of his neck and back were in a state of tonic contraction, and the abdominal muscles were hard and rigid. The wound in the sole of the foot had

quite healed and looked healthy, there being no tenderness. In fact, all that could be seen was a black spot in the skin where the nail had entered. The same evening, with the assistance of my partner, Dr. F. R. B. Hinde, who in the meantime had seen the case with me and verified my diagnosis, I freely excised the seat of puncture and swabbed out the wound with pure carbolic acid and packed and dressed it with sal alembroth gauze and wool. We then injected ten cubic centimetres of antitetanic serum subcutaneously into the abdominal walls and ordered 20 grains each of chloral hydrate and potassium bromide every four hours.

On Sept. 13th, at 10 A.M., the patient's condition was practically the same; he had no difficulty in swallowing and was taking liquid food well. The pulse was 100 and the temperature was normal. At 6 P.M. 30 cubic centimetres of serum were injected. On the 14th, at 10 A.M., he had had frequent attacks of tetanic convulsions during the night. The teeth were firmly clenched; there was marked opisthotonos, the muscles of the thighs and the calf muscles were in a state of tonic contraction, the feet were extended, and the toes were flexed. The abdominal walls were hard and the muscles were rigid. There was slight risus sardonicus. He was sweating very profusely. Touching at once brought on tetanic spasms. The pulse was 100 and the temperature was 99·4° F. At 6 P.M. his condition was the same. 30 cubic centimetres of serum were injected. No serum was administered after this date. On the 15th and 16th there was no improvement in his condition. He still had frequent attacks of mild tetanic convulsions, but was taking liquid nourishment well. On the 17th, at 10 A.M., he was about the same; he complained of great pain when "the cramp comes on." The pulse was 100 and the temperature was 98·8°. One-twelfth of a grain of curare was injected hypodermically into the forearm. At 6 P.M. his condition was the same as in the morning. One-sixth of a grain of curare was given. On the 18th, at 10 A.M., he had passed a more comfortable night. Muscular spasms were not so frequent or painful. The pulse was 100 and the temperature was normal. One-sixth of a grain of curare was administered. At 6 P.M. he had had very little pain. One-third of a grain of curare was injected.

From Sept. 19th to 21st the patient had been able to open his mouth slightly—about a quarter of an inch. There had been no tetanic convulsions and he could move his head very slightly from side to side. One-third of a grain of curare had been administered each morning and evening. On the 22nd and 23rd no curare was given. On the 24th, at 10 A.M., he had had a bad night. There had been several severe convulsions. His teeth were again clenched. He was resting on the back of his head and heels. There was slight rigidity of the muscles of the arms. He asked to have his arm pricked again. Half a grain of curare was injected. At 6 P.M. another half a grain of curare was given. On the 25th at 10 A.M. one-third of a grain of curare was administered. At 6 P.M. he was much better and was able to open his mouth half an inch. There were no convulsions. One-third of a grain of curare was given. On the 26th at 10 A.M. he was able to open his mouth and to move his head from side to side. The muscles of the back, the abdomen, the thighs, and the legs were still in a state of tonic contraction. There was no clonic spasm. One third of a grain of curare was injected. From Sept. 27th to Oct. 4th the muscular rigidity was gradually passing off and the patient was able to take solid food. Half a grain of curare was given every evening. After Oct. 4th no curare was administered. On the 5th, 6th, and 7th he was better and sat up in bed each day. On the 8th and 9th he was out of bed and sitting in a chair. On the 11th he was able to walk round the bedroom. On the 13th he went down stairs and was feeling very well; his back was still a little stiff. On the 15th he walked about the garden, on the 16th he was able to walk well, and on the 18th he had recovered.

From Sept. 13th to 17th the patient was taking 20 grains each of chloral hydrate and potassium bromide every four hours. On the 18th I decreased the dose to ten grains of each drug every four hours. This dose he took until the 23rd, when I again increased the dose to 20 grains which he took every four hours till the 26th, after which no more was taken. The wound in the sole of the foot caused by the very free excision which I made was washed daily with carbolic lotion 1 in 40 and packed with sal alembroth gauze. It healed without suppuration and never once caused the slightest pain.

The pathology of tetanus suggests the rational treatment of the disease and before offering any remarks on the treatment I should like to point out the advisability of dropping the word "idiopathic" in connexion with tetanus as misleading. There is no such thing as *idiopathic* tetanus. Tetanus is an inoculable disease. There must be a broken surface of skin or mucous membrane through which the tetanus bacillus is introduced or finds its way. In the so-called idiopathic cases the local injury—a mere prick or a scratch—has been so slight that the point of entry of the bacillus has been overlooked.

In the treatment of tetanus prophylaxis plays an unimportant part. Tetanus is so rare that it would be unjustifiable to employ such heroic treatment as would be necessary to destroy the bacillus even if we considered the possibility of its presence in every wound, or even in those wounds in which, from their nature and causation, there is a greater possibility of its having been introduced. Of course, every wound ought to be treated on strict antiseptic lines but this treatment is not sufficient to destroy the bacillus of tetanus which possesses great resisting power to the ordinary methods of destruction. We know that the bacilli live, multiply, and generate their specific poison in the wound itself and its immediate locality. Therefore our duty is on the first manifestation of symptoms freely to remove the site of inoculation, when possible, by the knife, otherwise by the actual cautery or scraping, and in every case swabbing out the wound with pure carbolic acid.

The question of amputation of a limb might arise on account of tetanus supervening upon some severe injury to the limb, such as a compound fracture, a severe crushing, or a gunshot wound. The question is a difficult one. If the injury is very severe and symptoms of tetanus show themselves within five days after the accident the case is more than likely to be an acute one and the chances to be altogether against the patient's recovery. In these circumstances I should advise amputation. On the other hand, if symptoms do not appear until after the fifth day I would employ the best means at my disposal of destroying the bacilli and endeavour to save the limb.

After removing the site of inoculation antitetanic serum should be injected under the skin of the abdomen in large doses (from 20 to 30 cubic centimetres) and repeated daily for a week or ten days. Theoretically this should neutralise the poison already absorbed into the system; anyhow, it is the only means which we have of achieving that object and large doses cause no ill-effects. I cannot conceive that curare has a direct action on the specific poison but that it has some influence in diminishing the severity of the clonic tetanic spasms I feel sure, it is said by paralysing the nerve endings It should be injected hypodermically morning and evening, commencing with one sixth of a grain and gradually increasing the dose, according to the severity of the spasms, to one grain. Chloral hydrate and potassium bromide (20 or 30 grains of each every four or six hours) appear to me to be the most likely drugs to give beneficial results in producing sleep and relieving the irritability of the motor nerve cells in the brain and the spinal cord. Other details in the treatment of tetanus, such as absolute quiet in a darkened room, the administration of chloroform for relieving severe tetanic convulsions or for passing the feeding tube or catheter, and the choice of suitable aperients, need no comment.

Sawbridgeworth.

NOTES ON SOME INTERESTING SURGICAL CASES IN AFRICAN NATIVES.

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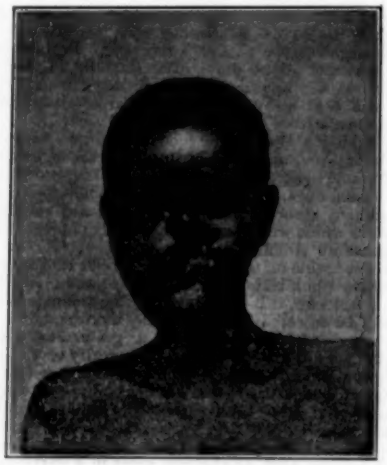
CASES recently published in THE LANCET by the Bishop of Zanzibar[1] and Mr. P. H. Ward[2] of Lomagundi, Southern Rhodesia, show that African natives possess a great recuperative power which enables them to recover from some very serious obstetric accidents and surgical injuries. The first of the three cases now described supplies a further instance of the same kind and, moreover, in several respects resembles the one recorded by Mr. Ward.

[1] THE LANCET, May 7th (p. 1278) and July 30th (p. 301), 1904.
[2] THE LANCET, Oct. 15th (p. 1080), 1904.

CASE 1.—On August 29th, 1904, a man was brought a distance of ten miles to me with a note saying that he had smashed his face on a doorstep the previous night while insane. 20 hours had elapsed and he presented a dreadful appearance indeed. A month before this occurrence I had sent him to the Boma as insane, the boys having cut him down from a tree. I found a round wound under the chin leading to the left side of the tongue. The left half of the lower jaw was gone and the left superior maxillary bone was in fragments. The right lower jaw was broken and the nose was split into three strips. The wound terminated between the eyes. The chin hung over to the right shoulder and the eyes were bloodshot though not injured. I came to the conclusion that it was a gunshot wound, the bullet entering under the chin and leaving between the eyes, and I accordingly reported it as such. When able to speak the man confessed to pulling the trigger with his toe. The likelihood of his surviving was so small on admission that I simply picked out the fragments of bone with forceps and cleansed the wound. For three days he had nothing but water delivered from a syringe to the back of his tongue; then as he seemed to be improving I dissected out the broken lower jaw on the right side and trimmed up the remains of the left side with bone forceps. All the nasal bones were removed and only a small part of the palate remained. I then began feeding him by means of a tube. Later I removed the anterior portion of the right superior maxillary bone with the object of endeavouring to close up the gap in the face. This, however, could not be accomplished and he was discharged presenting the appearance shown in the accompanying illustration. He could eat his soft nsima (or native



Showing extent of injury.

porridge) and drink fluids as I got the chin drawn together. He manifested no signs of mental aberration either while in the hospital or afterwards up to the present date (January, 1905).

CASE 2.—In the literature at my command here I cannot find any record of a large number of calculi being found in the urethra and I believe the following case will be of interest. On Oct 26th, 1904, a boy about 18 years of age, was brought to me with the history of having syphilis of a year's duration. He complained of pain on passing urine and was in a very low condition indeed. On examination the penis was found to be six inches in circumference and gave a feeling like crepitus. The prepuce was bound down and as a probe even could not be passed into the opening for any distance I decided to lay it open for examination. The urethra could not be made out and as I dissected backwards I found a sac containing 47 stones. On the floor of the sac was a little tumour of the size of a large grape which I removed. I found that the urethra was intact and that the sac lay above it in the corpora cavernosa. I stitched up the wound and the boy passed urine, so I hoped for his recovery, but four days afterwards he suddenly became delirious and died in a few hours. At the necropsy the bladder was found to be hypertrophied but it contained no calculi. The kidneys and the liver were slightly cirrhotic. The lungs were both adherent as the result of old pleurisy. The largest calculus weighed two grammes and the total weight was 39 grammes.

In "White and Martin's Genito-Urinary Surgery," fourth edition, p. 30, I find it noted that indurations, fibrous, calcareous, or even bony, may be found in middle-aged men associated with rheumatism or gouty diathesis. They have been also regarded as late lesions in syphilis. I think, however, that these calculi were the result of a stricture of the urethra, causing a sac in which they formed. Unfortunately the tumour was allowed to dry up and no sections were examined. The boy must have suffered pain and inconvenience, yet it was only on being found in his village that he was persuaded to come for treatment.

CASE 3.—A boy came to the hospital on Dec. 13th, 1904, with swelling of the right wrist and as no abrasion was found the condition was thought to be due to a sprain received when he was at work hoeing in the plantation. A carbolic fomentation was applied and he was told to return the next morning. Ten days afterwards he reappeared with the lower extremity of the ulna exposed and the whole wrist-joint completely disorganised. He was suffering slightly from septicæmia. An amputation at the elbow was performed and he returned home in 18 days. The boy must have suffered greatly before the pus evacuated itself yet the people are so ignorant that some will not come for treatment though just at hand.

Angoniland, British Central Africa.

AN INVESTIGATION INTO THE CAUSATION OF PUERPERAL INFECTIONS.

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(*From the Bacteriological Department of the Middlesex Hospital.*)

(*Concluded from p. 921.*)

The bacteriological findings in the 54 cases.—It will be seen from the analysis of the bacteriological findings which is given in Table II. that our results confirm the very generally accepted opinion as to the predominating importance of streptococci in puerperal infections. Out of 39 cases of fever following on either miscarriage or labour at full term in which bacteria were found in the cavity of the uterus streptococci were present in 25 (64·1 per cent). Taking the complete series of 54 cases, streptococci were found in the uterus in 46·2 per cent., and were found twice in the vaginal lochia when the contents of the uterus were sterile of bacteria. If we exclude the 14 cases of Series C in which the symptoms were but slight and in which the temperature did not rise above 101° F., the importance of streptococci becomes still more marked. In Series A and B there are altogether 40 cases—six in which the fever resulted from miscarriage and 34 in which it came on after labour at full term. Amongst these 40 cases there were 14 deaths, two of which occurred after miscarriage, and streptococci were found in the uterus in both of the cases in which death occurred after miscarriage and in eight out of the remaining 12 cases. Amongst these 40 cases bacteria were found in the uterus in 35 and the uterus was sterile of bacteria in five; in the former cases streptococci were found in the uterus 25 times and in the vaginal lochia in two of the cases in which the uterus was found to be sterile of bacteria. Taking the "severe" cases of puerperal fever (Series A and B) streptococci were present in the uterus in 62·5 per cent., as against 46·2 per cent. taking all cases in the three series. If our cases are sufficiently numerous to

TABLE II.—ANALYSIS OF THE RESULTS OF THE BACTERIOLOGICAL EXAMINATION OF THE CONTENTS OF THE UTERUS IN 54 CASES. *A*—CASES TERMINATING IN DEATH. *B*—SEVERE CASES WITH RECOVERY. *C*—CASES OF SLIGHT FEVER.

	—	Uterus sterile of bacteria.	Bacteria isolated from contents of the uterus.	Species of bacteria present in the uterus in 39 cases.																		
				Streptococci: in pure culture.	Streptococci and bacillus coli communis.	Streptococci and staphylococcus pyogenes albus.	Streptococci, staphylococcus pyogenes albus, and bacillus coli communis.	Streptococci, bacillus coli communis, and bacillus pyocyaneus.	Streptococci, bacillus coli communis, and another bacillus (Case 10).	Streptococci, staphylococcus pyogenes albus, and a bacillus (Case 29).	Micrococcus pneumoniæ: in pure culture.	Diplococcus (+ Gram), ? micrococcus pneumoniæ: in pure culture (Case 13).	Micrococcus pneumoniæ, bacillus coli communis, and staphylococcus pyogenes albus.	Micrococcus pneumoniæ and bacillus coli communis.	Diplococcus (+ Gram), ? micrococcus pneumoniæ and bacillus coli communis (Case 33).	Staphylococcus pyogenes aureus and bacillus coli communis.	Staphylococcus pyogenes albus: in pure culture.	Staphylococcus pyogenes albus and bacillus coli communis.	Diplococci (– Gram), not micrococcus gonorrhœæ: in pure culture (Cases 14 and 44).	"Diphtheroid" bacillus: in pure culture.	"Diphtheroid" bacillus and ? another bacillus (+ Gram).	Total.
A. 14 cases.	Miscarriage...	—	2	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
	Labour at full term	—	12	2	4	—	1	—		—	—	1	2	—	—	—	—	—	1	—	—	12
B. 26 cases.	Miscarriage...	—	4	—	—	1	—	1	—	—	1	—	—	—	—	—	—	—	—	—	1	4
	Labour at full term	5	17	8	1	3	—	—	—	1	—	—	—	1	1	1	—	—	—	1	—	17
C. 14 cases.	Miscarriage...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0
	Labour at full term	10	4	—	—	—	—	—	—	—	—	—	—	—	—	—	1	2	1	—	—	4
		15	39	10	6	4	2	1	1	1	1	1	2	1	1	1	1	2	2	1	1	39

Streptococci in pure culture ... ... 10 cases.
" with other bacteria ... ... 15 "
25 "

Micrococcus pneumoniæ in pure culture ... ... 1 case.
" " with other bacteria ... ... 3 cases.
? " " ... ... 2 "
6 "

allow trustworthy conclusions to be drawn from our results it will be seen at once how important are the streptococcic forms of puerperal fever. It will also be generally accepted, we think, that in the absence of exact bacteriological diagnosis of the nature of the infection in a case of puerperal fever the safest course to follow is to treat it as if it were of streptococcic origin. Whilst practically all those who have examined the uterine contents in cases of puerperal fever agree as to the frequent occurrence of streptococci in such cases there is a good deal of difference between the results of individuals. Thus Czerniewski found streptococci present in the uterus in 49 out of 91 examined—53·8 per cent.; Krönig found them in 75 out of 179 cases examined—41·9 per cent.; Whitridge Williams found them in 44 out of 150 cases examined—29·4 per cent.; and Vogel found them in 7 out of 24 cases examined—29·1 per cent.

A point of great practical importance in connexion with the question of serum treatment is that of the specific identity of the various forms of streptococci which are found in cases of puerperal fever. We do not propose to go into this point in detail in the present communication but we may say that between various strains of streptococci which we have found in the uterus in our 25 cases there have been such marked differences in some instances as to justify us in assuming that we have been dealing with several distinct species and not merely with varieties of one and the same streptococcus.

The next micro-organism in order of importance in our series was the micrococcus pneumoniæ, which we identify positively in four cases and believe to have been present in two others (Table I., Cases 11, 12, 31, 32, (?) 13, (?) 33). In Cases 11, 12, 31, and 32 the organism was fully identified as the micrococcus pneumoniæ by its appearance in the uterine discharge and in Case 12 by its appearance in stained sections of the uterine wall as well, by its cultural characteristics, and by the results of animal inoculation; in Cases 13 and 33 encapsuled diplococci which stained by Gram's method were found in the uterine lochia, and an organism corresponding exactly in cultural characteristics with the micrococcus pneumoniæ was isolated but the animal experiments failed. Large doses of a pure culture in broth of the diplococcus isolated from Case 13 were without any pathogenic action on the mouse, and the animal experiments with the diplococcus isolated from Case 33 failed from accidental causes and could not be repeated. We have, however, little doubt that the organism which we isolated from each of these two cases was, in fact, the micrococcus pneumoniæ.

The following points of interest in connexion with this set of pneumococcic cases may be mentioned. Case 13, one of the two cases in which we did not establish absolutely the identity of the organism isolated, was attended in her confinement by the same practitioner who a few days previously had attended Case 31, in which the identity of the organism was absolutely proved. Case 32 was one of miscarriage at the third month and on the third day afterwards a pure culture of the micrococcus pneumoniæ was isolated from the contents of the uterus. There was no history of pneumonia or other previous illness and we concluded that the case was probably one of primary affection of the uterus rather than merely a miscarriage occurring in the course of a pneumonia with general infection. Our series certainly contains an unusual number of pneumococcic infections when compared with results which others have published and further reference to such cases will be found in a short paper dealing with our first case (Table I., 11), which appeared in the *British Journal of Gynæcology*, May, 1903.

The next recognised pathogenic species which we have to refer to is the staphylococcus pyogenes aureus, which we found once in association with the bacillus coli communis in Case 30. Others have remarked on the infrequency of occurrence of this organism in puerperal infections, an observation which our own results confirm. The case in which this coccus occurred presented a sharp rise of temperature to 103° F., but convalescence followed quickly on exploration of the uterus and subsequent douching.

We have now referred to the examination of 32 of the 39 cases in which we found bacteria in the contents of the uterus and in each case the micro-organism found was of a definitely recognised pathogenic species and of such a nature that we might reasonably assume that the symptoms in the respective cases were due to the infection which we have

proved. The remaining seven cases in which bacteria were found in the uterus come, however, under a somewhat different category, inasmuch as it might be questioned whether the organisms found in the uterus were the actual cause of the illness. These seven cases comprise Cases 34 and 35, in which a "diphtheroid" bacillus was found in the uterus; Case 43, in which we obtained a pure culture of the staphylococcus pyogenes albus from the contents of the uterus; Cases 41 and 42, in which we found the staphylococcus pyogenes albus in the uterus in association with the bacillus coli communis; and Cases 14 and 44, in which we obtained from the contents of the uterus a pure culture of a diplococcus which did not stain by Gram's method and which grew freely on ordinary nutrient gelatin at a temperature of 20° C., and without liquefying the medium.

Some account of the characteristics of the "diphtheroid" bacillus which we isolated from Cases 34 and 35 has already been published in Vol. LIV. of the Transactions of the Pathological Society, and we need only say now that morphologically the bacillus was indistinguishable from the bacillus diphtheriæ, but that it otherwise presented the following points of distinction: (1) it did not produce any acid in glucose peptone broth after six days' incubation at a temperature of 37° C.; and (2) it was non-pathogenic for the guinea-pig. We have found a similar "diphtheroid" bacillus in the cervical secretion of non-pregnant women, but it appears to us to be probable that in the two cases of puerperal fever in which we found it the organism was present in a pathogenic capacity. The bacillus which we have described is possibly the same species as that found by Halle in the vagina and believed by him to be the pseudo-diphtheria bacillus of Weeks. It is on record that the bacillus diphtheriæ has been found several times in the uterus or in the vaginal lochia but so far as we can ascertain the description of the bacillus found in these cases would apply to our "diphtheroid" bacillus equally as well as to the true bacillus diphtheriæ.

Cases 41, 42, and 43 can be dismissed in very few words; in the first two we found the staphylococcus pyogenes albus and the bacillus coli communis in the uterus; in the last we found the staphylococcus pyogenes albus in pure culture. In all these cases the symptoms were of what may be termed a "slight" character, but we are not prepared to suggest whether or not they were due solely to the bacteria which we found. It may be pointed out that, at any rate, the bacteriological examination of the vaginal lochia in these three cases showed the presence in each case of the same bacteria as we found in the uterus.

The last two cases of those in which we found bacteria in the uterus are Nos. 14 and 44 in Table I. In both these cases we found in the uterus in pure culture a diplococcus which presented certain distinctive characters. The organism was a largish coccus which had a marked tendency to a diplococcal arrangement; it grew freely on all the ordinary media, including nutrient gelatin, which was not liquefied; the organism did not stain by Gram's method. We found a precisely similar diplococcus in one of the cases in which we examined the cervical secretion of non-pregnant women and once in the vaginal lochia when the puerperium was normal and the uterus was sterile and we are unable to suggest anything as to its pathogenic importance in the two cases of puerperal fever in which we found it in the uterus. The cases were clinically very different; Case 14 was one of severe puerperal fever which died within eight days of the onset of unfavourable symptoms, but we did not make any examination of the vaginal lochia, nor was there any examination after death; whilst Case 44 was a very mild case of puerperal fever in which symptoms disappeared within three days and without any treatment, except intra-uterine douching. We have been unable to identify this diplococcus with any of those which have been previously described as occurring in the genital passage of women. It is distinguished from the diplococcus which Bumm found in several cases of cystitis after labour by the fact that the growth on nutrient agar is of whitish colour and not yellowish as in the case of Bumm's diplococcus; and Bockhart's diplococcus which was found in cases of vaginitis, and which resembled this one in some respects, apparently was not decolourised when stained by Gram's method.

The frequency of occurrence of certain bacteria in puerperal infections.—Whilst our results correspond with those of the majority of workers at the pathology of puerperal infections with regard to what is perhaps the point of most practical importance—that is to say, the predominating importance of streptococci—there are certain other points as to which difference is noticeable. Our results have differed from those of some other writers with regard to the following points: (1) the relatively large number of cases in which we found the micrococcus pneumoniæ, certainly in four cases, and probably in two cases more; (2) the absence of the micrococcus gonorrhœæ in our series of puerperal infections; and (3) the absence of anaerobic bacteria, except for a single case in which a bacillus of this class was present apparently as a secondarily infecting organism. In illustration of these differences we may quote results obtained by Krönig, by Whitridge Williams, and by Vogel in their examination of the cavity of the uterus in cases of puerperal fever.

Krönig's results from the examination of 179 cases of puerperal endometritis were as follows: streptococci were found in 75 cases; staphylococci were found in four cases; the micrococcus gonorrhœæ was found in 50 cases. The remaining 50 cases were classified as "sapræmic"; in 43 of them no growth of bacteria could be obtained on ordinary media under aerobic conditions, but strictly anaerobic bacteria were found in 32, and therefore, presumably, in pure culture. It will be remembered that Krönig has also found the micrococcus gonorrhœæ and anaerobic bacteria in a certain proportion of the cases in which he has examined the lochia of normal puerperia.

Whitridge Williams gives the following results as obtained in the examination of the uterine lochia in 151 cases of puerperal fever: streptococci were found in pure culture in 31 cases; streptococci were found together with other bacteria (other than the micrococcus gonorrhœæ) in 13 cases; staphylococci were found in four cases; the micrococcus gonorrhœæ was found in eight cases; the bacillus coli communis was found in 11 cases; the bacillus diphtheriæ was found in one case; the bacillus typhosus was found in one case; unidentified aerobic bacteria were found in four cases; unidentified anaerobic bacteria were found in eight cases; bacteria were seen in coverslip preparations, but no growth was obtained, in 45 cases; absolutely sterile in 25 cases. With reference to two of the cases in Whitridge Williams's list, those in which the bacillus diphtheriæ and the bacillus typhosus are said to have occurred, it should be pointed out that in the first case full bacteriological proof of the identity of the organism present with the bacillus diphtheriæ was apparently not obtained, and with regard to the second case it is not clear whether the fever was due to a primary puerperal infection by the bacillus typhosus or whether the case was one of ordinary typhoid fever in the course of which labour supervened.

Vogel obtained the following results in a series of 24 febrile cases but did not use any special anaerobic methods of culture; streptococci were found in pure culture in two cases; streptococci were found with the micrococcus gonorrhœæ in two cases; streptococci with bacteria other than the micrococcus gonorrhœæ were found in three cases; the micrococcus gonorrhœæ was found in pure culture in two cases; the staphylococcus pyogenes aureus was found in one case; other aerobic bacteria were found in six cases; sterile, eight cases. Vogel remarks that the proportion of cases in which he found the micrococcus gonorrhœæ may, perhaps, be exceptional.

Whilst somewhat different results as to the precise causation of cases of puerperal infection may be expected in the examination of different series of cases, varying with the class of patient and the circumstances in which labour has occurred and in which treatment has been carried out, we confess that we are unable to offer any satisfactory explanation of the wide discrepancy between the results of the bacteriological examination in our series of 54 cases, and in the series of 179 which Krönig's statistics deal with. Even allowing for accidental failure of culture experiments it is difficult to understand how it was that in 54 cases we never found the micrococcus gonorrhœæ in the contents of the uterus and found an anaerobic organism only once, and as a secondary infection, when in his larger series Krönig found the micrococcus gonorrhœæ in nearly 28 per cent. of the cases, and anaerobic bacteria in pure culture in nearly 18 per cent. Whitridge Williams's results as regards anaerobic bacteria are probably not quite accurate as no cultures were obtained in a considerable number of cases in which bacteria were seen in stained specimens; but bacteria of this class were positively identified in about 5 per cent. of the series, whilst the micrococcus gonorrhœæ was found in exactly the same frequency. In Vogel's much smaller series the micrococcus gonorrhœæ was found in

about 16·6 per cent. of the cases, whilst no deductions as to the relative frequency of anaerobic bacteria can be made in the absence of any attempt to isolate them.

Taking all the facts into consideration and allowing for the possibility that in one or two cases our methods may have failed to detect the micrococcus gonorrhœæ and bacteria of the strictly anaerobic class respectively we think that it is impossible to accept Krönig's figures as representing the average frequency of occurrence of these bacteria in puerperal infections. Krönig's results also are remarkable for more than the mere frequency of finding of anaerobic bacteria; they are remarkable in that such bacteria were found in pure culture in as many as 32 out of 179 cases of puerperal endometritis examined. For, from what we know generally of infection by strictly anaerobic bacteria, there is reason to believe that in a very large majority of such cases the infection by the anaerobic organism is a secondary one; the conditions favourable to the growth of such bacteria are not found in a healthy wound such as the previously uncontaminated placental site presents. We realise that the peculiar conditions resulting from the retention in the uterus of what is practically dead tissue, retained placental fragments, or pieces of membrane would often permit a primary invasion by strictly anaerobic bacteria; but even so, we consider that Krönig's results with regard to the finding of anaerobic bacteria in cases of puerperal infection cannot be accepted as representing the average frequency of occurrence of this class of bacteria without further confirmation.

With regard to the frequency of occurrence of the micrococcus gonorrhœæ as a cause of puerperal fever there is a considerable difference between Whitridge Williams's 5 per cent. and Krönig's 28 per cent., the former not contrasting strongly with our own negative results in a smaller series. And here, again, we think that Krönig's results must be accepted with caution until confirmed by the work of others. We believe that undue importance has been attached to the micrococcus gonorrhœæ as a cause of puerperal fever by many writers; the bacteriological evidence of the frequency of gonorrhœal puerperal fever is open to question and the clinical evidence of its occurrence is often extremely doubtful.

We may next refer specially to those cases of puerperal fever in which the cavity of the uterus was found to be sterile of bacteria. Excluding cases of fever after miscarriage there were 48 cases of fever after labour at full term and in 33 of these we found bacteria in the cavity of the uterus. In 27 of these 33 cases the bacteria isolated were of definite pathogenic species and their presence in the uterus was sufficient to account for the symptoms of the respective cases; in the other six cases we found various bacteria of uncertain pathogenic action, but such that their presence afforded a reasonable explanation of the fever and no other more satisfactory explanation could be found. With regard to the remaining 15 cases in which no bacteria were found in the cavity of the uterus the following facts have to be noted:—

Severe cases (Series B).—Case 36: first pregnancy; laceration of the perineum; streptococci present in the vaginal lochia. Case 37: first pregnancy; laceration of the cervix and the perineum; streptococci present in the vaginal lochia. Case 38: first pregnancy; laceration of the cervix and the perineum. Case 39: second pregnancy; laceration of the cervix. Case 40: sixth pregnancy; no obvious laceration.

Slight cases (Series C).—Case 45: Second pregnancy; no obvious laceration. Case 46: first pregnancy; laceration of the cervix and the perineum. Case 47: first pregnancy; very extensive laceration of the perineum. Case 48: first pregnancy; laceration of the cervix and the perineum. Case 49: first pregnancy; laceration of the cervix and the perineum. Case 50: eighth pregnancy; no obvious laceration. Case 51: first pregnancy; laceration of the perineum. Case 52: first pregnancy; laceration of the perineum. Case 53: ninth pregnancy; laceration of the perineum. Case 54: first pregnancy; laceration of the perineum.

Amongst these 15 cases in which the contents of the uterus were sterile there were ten in which the patients were primiparæ, with, in every case, considerable laceration of the cervix or the perineum and in two of the cases streptococci were found in the vaginal lochia; in the remaining five cases the patients were multiparæ, and in two of these there was laceration of the cervix or perineum. Out of our 48 cases of fever after labour at full term, therefore, there were only three cases in which the occurrence of fever could not be explained with probability either by the presence of bacteria in the uterus or by the happening of laceration of the lower passage. These facts suggest that the probability of error arising from failure to detect the micrococcus gonorrhœæ or anaerobic bacteria in the course of our experiments may be regarded as comparatively small.

The influence of secondary infections on the course of puerperal fevers.—The relative importance of secondarily infecting bacteria is a question which must necessarily be considered in an investigation that deals with a class of disease in which there is every opportunity for secondary infection to occur. The results of our examinations with regard to this aspect of the pathology of puerperal fevers, and fevers occurring after miscarriage, may be stated as follows.

Series A.—Bacteria were found in the uterus in 14 severe cases which ended in death. A single species (streptococci twice) was found in four cases; streptococci and bacillus coli communis were found in five cases; streptococci, bacillus coli communis, and staphylococcus pyogenes albus were found in three cases; streptococci, bacillus coli communis, and an anaerobic bacillus were found in one case; micrococcus pneumoniæ, bacillus coli communis, and staphylococcus pyogenes albus were found in one case.

Series B.—Bacteria were found in the uterus in 21 severe cases which ended in recovery. A single species (streptococci seven times) was found in nine cases; streptococci and bacillus coli communis were found in one case; streptococci, bacillus coli communis, and bacillus pyocyaneus were found in one case; streptococci and staphylococcus pyogenes albus were found in four cases; streptococci, staphylococcus pyogenes albus, and an aerobic bacillus were found in one case; staphylococcus pyogenes aureus and bacillus coli communis were found in one case; micrococcus pneumoniæ and bacillus coli communis were found in one case; (?) micrococcus pneumoniæ and bacillus coli communis were found in one case; micrococcus pneumoniæ, bacillus coli communis, and staphylococcus pyogenes albus were found in one case; a "diphtheroid" bacillus and (?) another aerobic bacillus were found in one case.

Series C.—Bacteria were found in the uterus in four cases of slight fever which ended in recovery. A single species (staphylococcus pyogenes albus once) was found in two cases; staphylococcus pyogenes albus and bacillus coli communis were found in two cases.

Thus, out of 39 cases in which bacteria were found in the cavity of the uterus, in 26 more than a single species was present, and in a considerable majority of these cases of mixed infection either the bacillus coli communis or the staphylococcus pyogenes albus was present in association with the more virulent streptococci or micrococci pneumoniæ, which were, presumably, the primary infecting organisms.

Several writers on puerperal infection have held that the virulence of a primary streptococcic infection is greatly increased by a consecutive invasion of the uterus by the bacillus coli communis, and a reference to our results will suggest that there is a frequent association of these two species in severe cases of puerperal fever. But whether, as a rule, a subsequent invasion by the bacillus coli communis increases materially the severity of a streptococcic infection, under the given conditions, or whether it is the primary severity of the streptococcic infection which predisposes to a comparatively harmless secondary invasion of the cavity of the uterus by the bacillus coli communis, is not quite clear at present. In a considerable proportion of the cases in which we found a mixed infection by streptococci and either the bacillus coli communis or the staphylococcus pyogenes albus, the streptococci were present apparently in enormously preponderating numbers.

Taking a broad view, however, of the question in connexion with our particular series of cases it would appear that the finding of the bacillus coli communis in the uterine lochia in association with streptococci has a certain serious significance in relation to prognosis, whatever may be the precise influence which the bacillus itself exerts on the course of the case.

Sources of infection.—The source of infection in a case of puerperal fever may be found in the person of the patient herself or infection may be conveyed by those who attend her in her confinement. In the former case puerperal fever may arise from a spontaneous invasion of the uterus by bacteria present in the cervical canal or in the upper part of

the vagina before the commencement of labour, or it may be caused by the conveyance of bacteria from the lower part of the passage to the cavity of the uterus by the manipulations of those who are attending on the patient. The conveyance of infection from outside sources by those who are responsible for the care of the patient during her confinement is a matter which has no special claim on our attention here; we may, however, mention that in our comparatively small series there were three cases of streptococcic infection which occurred within a short time of each other in the work of one practitioner, that a couple of cases of streptococcic and a couple of cases of pneumococcic infection occurred under similar conditions amongst the patients of two other practitioners. There has, however, been much difference of opinion as to the relative importance of auto-infection—that is to say, of infection from sources within the patient herself—in the causation of puerperal fever, and in this relation much work of investigation into the bacteriological condition of the cervical canal and upper part of the vagina in pregnant women has been carried out. And the general trend of teaching at the present time is that such source of infection may in a general sense be disregarded, and that the obstetrician has only to guard against infection from without.

Believing, as we do, that the most frequent cause of severe puerperal fever, and the most important factor in the causation of mortality from puerperal fevers, is one or other form of streptococcic infection, and there being also reason for believing that in a very large majority of cases of streptococcic infection the conveyance is from without, it is impossible to question the soundness of this teaching generally and for practical purposes. But if we consider all cases of puerperal fever, slight and severe, it is also impossible to doubt that a certain not altogether inconsiderable proportion do arise from auto-infection. So many investigations into the bacteriological constituents of the vaginal secretion of pregnant women have already been made that we did not think it necessary to re-investigate this subject and we think that an impartial review of all the work which has been carried out and published with regard to this matter will convince most obstetricians that the vagina and cervical canal of the pregnant woman may contain bacteria which are potential causes of puerperal fever. And, given the presence of such bacteria before labour, in the cervical canal especially, it is obvious that infection of the cavity of the uterus, or of lacerations of the cervix itself, must occur from time to time.

We have, however, made a bacteriological examination of the cervical secretion in 30 non-pregnant women with more or less catarrh of the lining of the canal in order to ascertain whether the bacteria which are to be found in the secretion in cases of slight disease are such as may be a cause of puerperal fever. As the result of our examination we found several bacteria which have already been referred to as being found in the uterus in cases of puerperal fever. Thus, we have found in both the cervical canal of non-pregnant women and in the puerperal uterus the staphylococcus pyogenes aureus, the staphylococcus pyogenes albus, the "diphtheroid" bacillus which we have described, a diplococcus which did not stain by Gram's method and was not the micrococcus gonorrhœæ, and another diplococcus which corresponded in every particular except pathogenicity for lower animals with the micrococcus pneumoniæ. We also found the micrococcus gonorrhœæ in the cervical secretion, although we have not been able to demonstrate[1] its presence in the uterus in any of our puerperal cases. Having regard to these results of the examination of 30 women, taken at random from amongst patients who complained of suffering from "whites," we think that it is obvious that opportunity for auto-infection must be of fairly frequent occurrence and it is probable that a very definite proportion of the cases of puerperal fever, of a mild type at any rate, arise in this way.

Conclusions.—We may now briefly refer to some points of practical interest which are suggested by the results of our investigation. In the first place it seems obvious that the old classification of cases of puerperal fever into sapræmic, septicæmic, and pyæmic has but little value; a comparison of clinical observations with bacteriological findings shows that it is practically impossible to distinguish between cases of septicæmia which are, for the time, of a mild type and cases of "sapræmia," using the latter term in what we apprehend to have been the sense in which it was formerly used in this connexion. And bacteriologically the distinction between a case of septicæmia and one of "sapræmia," or toxæmia as we would now term it, is often extremely indefinite. Whilst no really useful and at the same time concise scheme for the classification of a class of diseases presenting the variety of features which is presented in puerperal fevers is practicable, the following scheme at any rate indicates the main pathological processes concerned in the production of the symptoms of these infections:—

I. Infection of lacerations of the perineal tissues or of the vaginal wall (sometimes with direct extension by continuity of surface to the cavity of the uterus).	1. Localised infection + toxæmia. 2. Localised infection + toxæmia + generalised infection.
II. Primary infection of the contents of the uterus or of the placental site.	1. Localised infection + toxæmia. 2. Localised infection + toxæmia + generalised infection.

We have already said that perhaps the chief point which presents itself amongst the results of our investigation is the predominating importance of streptococcic infection in the causation of puerperal fevers. Thus, referring once again to the results of our bacteriological examinations, it will be seen that out of 14 cases of puerperal fever which ended in death, 10 were cases of streptococcic infection; that in 26 severe cases which ended in recovery there were 16 patients who had a streptococcic infection of the uterus and two who showed streptococci in the vaginal lochia only, whilst none of the 14 cases of "slight" fever (temperature not rising above 102° F.) had a streptococcic infection. And the next important organism was micrococcus pneumoniæ, which accounted for three out of the four other deaths, the cause of the remaining death remained uncertain, whilst by various strains of streptococci or by micrococcus pneumoniæ was present in 33 out of 40 cases of puerperal fever (Groups A and B), and these organisms may be held responsible for 13 out of the 14 cases which occurred (Series A). And between streptococcus pyogenes and micrococcus pneumoniæ there are such close relationships with respect to pathogenic action that, apart from the question of specific antitoxic serum treatment, the question of general treatment may be regarded as applicable to both.

We think, therefore, that we are justified in laying down as a general rule that in the absence of a definite bacteriological diagnosis the safe course for the practitioner to adopt is to deal with every case of puerperal fever in which the temperature rises above 102° F. as if it were a case of streptococcic infection.

With regard to the question of the special antitoxic treatment of streptococcic infection there is very little that need be said now, the more especially so as one of us has recently dealt with the matter at some length.[2] We believe, however, that more than one species of streptococcus is met with in puerperal infections and that for serum treatment to be applied with any reasonable hope of success under present conditions a polyvalent or compound serum from a horse immunised against the various strains of streptococci which are met with in puerperal infections is necessary. And we believe that by the use of such a compound antistreptococcic serum, recently obtained from the horse and used in sufficiently large doses, a considerable reduction in the mortality caused by streptococcic puerperal fever could be effected.

The next point which we have to consider is the question of active curettage of the uterus in cases of puerperal infection. In the case of either a streptococcic or pneumococcic infection of the uterus, with or without secondary infection by other bacteria, this procedure would seem on the one hand to be incapable of doing any good, and on the other hand might be productive of most serious result by infecting the hitherto intact deeper tissues of the uterine wall. Nor, again, is it probable that in cases in which the uterus is invaded by bacteria which, unlike the streptococci and micrococcus pneumoniæ, have little tendency to infect the deeper layers of the uterine tissues, the operation is likely to effect any definite good by removing all infection, however thoroughly the curettage may be carried out. We consider, therefore, that the use of the curette should be absolutely discarded in the treatment of puerperal uterine infection.

[1] Full details of this series of cases will be found in the Transactions of the Obstetrical Society of London, 1905.

[2] The Treatment of Streptococcic Puerperal Fever by Antitoxic Serum, THE LANCET, Dec. 31st, 1904, p. 1828.

The results of the treatment of some of the cases of streptococcic infection which have been dealt with in this paper have been such as to suggest that the best local treatment to adopt is that which is now commonly carried out in this country at the onset of puerperal fever—digital exploration of the uterus, the removal in this way of any retained fragments and subsequent douching of the cavity of the uterus with an antiseptic solution. A clinical fact of some importance is that, although invasion of the uterus by streptococci is marked by a sharp rise of temperature and other symptoms of some severity, the fever may be transient, subsiding within 48 hours without any special treatment. This fact is one that may be usefully remembered when tracing the conveyance of infection in puerperal cases.

The last matter which we have to refer to is the question of preventive measures which can be taken against the risk of auto-infection, the use more especially of vaginal douching with antiseptic solutions before the commencement of labour. We have the strongest doubts as to the effect of any such douching upon bacteria located in the cervical canal, such as those which we found in the cervical secretion of non-pregnant women, and regard the procedure as generally a useless one. But at the same time the objection which has been urged against it, that by means of it bacteria may be conveyed from the vulva to the upper part of the vagina, appears to be without good foundation.

Clinical Notes:

URGICAL, OBSTETRICAL, AND HERAPEUTICAL.

ASE OF STRANGULATED HERNIA.

T, M.R.C.S. ENG., L.R.C.P. LOND.

will probably prove interesting to some CET.

iled to see a man, aged 77 years, whom I y arrival. I made a post-mortem examina- ed general peritonitis caused by a strangulated gut being gangrenous, perforated, and united to ain of the sac by recent adhesions. The hernia, which was of the oblique inguinal variety, had not reached the scrotum. From the perforation there protruded what at first sight appeared to be a mass of fæces but on slitting up the intestine and removing this I found that it was a portion of newspaper apparently carefully folded up to about the size of a domino but slightly thicker, forming a hard angular mass; this was lying in the strangulated loop of intestine. Just above it there was another rather smaller piece also folded. They both had a very slight fæcal envelope. At the inquest it came out that the deceased had suffered from chronic constipation and I think it is not improbable that the paper might have been swallowed in the hope of obtaining an action of the bowels. The friends could throw no light on the matter. The paper when unfolded proved to be about a quarter of a sheet of the *Star* newspaper, the printing being none the worse for its journey through the stomach and small intestines. The hernia was an old-standing one. According to the friends there were no symptoms necessitating medical attendance, except a slight "bellyache" during the night on which the man died.

Holland Park-avenue, W.

NOTE ON A CASE OF OBSTRUCTION TO THE THIRD STAGE OF LABOUR BY A CERVICAL FIBROID.

BY W. BAIN, M.B., B.S. LOND.

THE following case which occurred in the maternity department of the Middlesex Hospital presents some features that are interesting and uncommon.

The patient, a woman, aged 38 years, had had 12 children, the last one being two years old. When confined she was at full term and her pregnancy had proceeded normally. There was nothing to note about the first part of the labour beyond the fact that the size of the uterus and its irregularity suggested to the attendant the possibility of twins. The birth of the child took place naturally but was followed by fairly severe hæmorrhage which was, however, controlled by stimulation of the uterus and a hot douche. It was at this point that I was called in. The patient was very blanched and had a pulse of 140 which was soft and feeble. The placenta was still in the uterus. On palpating per abdomen the uterus was found to be fairly contracted and irregular in shape, a large prominence being felt on the left and another on the right.

On making a vaginal examination the passage of the finger through the internal os was prevented by a hard mass. On pressing in a direction almost directly forwards the obstacle was surmounted. The placenta was found to be imprisoned in the fundus of the uterus. With considerable difficulty and some renewal of the hæmorrhage it was delivered. The difficulty was rendered greater by the placenta being closely adherent to the uterine wall. After delivery the uterus contracted and the tumour was found to be a large fibroid situated in the posterior wall just above the internal os. The patient's condition after this was critical but after the infusion of two and a half pints of normal saline solution by way of the right median basilic vein she rapidly improved and made a good recovery.

The interest of the case lies in its demonstration of a well-known fact—the power which the uterus has of contracting and pulling a cervical fibroid above the presenting head. The subsequent sinking of the uterus into the pelvis caused the tumour to become an absolute bar to the passage of the placenta without help.

Middlesex Hospital, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

WESTMINSTER HOSPITAL.

A CASE OF ACUTE GLANDERS.

(Under the care of Mr. WALTER G. SPENCER.)

FOR the notes of the case we are indebted to Mr. M. J. Cromie, house surgeon.

A horse-keeper, aged 25 years, was admitted to the Westminster Hospital from an infected stable on Nov. 12th, 1904, at 8.30 P.M. A consultation between Dr. R. G. Hebb and Mr. Spencer at 11 P.M. lead to a surmise that the patient was suffering from acute glanders. On the following day Dr. Hebb found the bacillus mallei in cultivation. The patient died 33 hours after admission. Animal inoculations made at the Lister Institute proved the case to be one of acute glanders, the organisms being exceptionally virulent. A full consideration of the case exposes possibilities of infection and of such cases being overlooked.

The actual date of inoculation could not be verified. On Oct. 31st the patient fell while cleaning his stable and hurt his side to which a medical man applied a belladonna plaster. On Nov. 3rd he had pain and swelling of the left side of the face and went to a dentist who advised him to bathe his face in hot water and told him that an abscess was forming but no incision was made. He next saw two other medical men who told him that he had cellulitis and erysipelas. On Nov. 9th small hard lumps began to appear in the limbs in the neighbourhood of the joints, with pain in the joints, especially the knees. On this day, the 9th, the patient went to a hospital and on his out-patient paper was entered cellulitis of the face. An incision was advised, but as he could not be admitted and felt very ill he declined it. On the 10th the nodular swellings became red and inflamed and pustules appeared on the swollen face, the lips, and the buccal aspect of the lips and the cheek. The lips became black, nasal discharges commenced, and dyspnœa supervened. He was therefore taken to another hospital where

the vagina before the commencement of labour, or it may be caused by the conveyance of bacteria from the lower part of the passage to the cavity of the uterus by the manipulations of those who are attending on the patient. The conveyance of infection from outside sources by those who are responsible for the care of the patient during her confinement is a matter which has no special claim on our attention here; we may, however, mention that in our comparatively small series there were three cases of streptococcic infection which occurred within a short time of each other in the work of one practitioner, that a couple of cases of streptococcic and a couple of cases of pneumococcic infection occurred under similar conditions amongst the patients of two other practitioners. There has, however, been much difference of opinion as to the relative importance of auto-infection—that is to say, of infection from sources within the patient herself—in the causation of puerperal fever, and in this relation much work of investigation into the bacteriological condition of the cervical canal and upper part of the vagina in pregnant women has been carried out. And the general trend of teaching at the present time is that such source of infection may in a general sense be disregarded, and that the obstetrician has only to guard against infection from without.

Believing, as we do, that the most frequent cause of severe puerperal fever, and the most important factor in the causation of mortality from puerperal fevers, is one or other form of streptococcic infection, and there being also reason for believing that in a very large majority of cases of streptococcic infection the conveyance is from without, it is impossible to question the soundness of this teaching generally and for practical purposes. But if we consider all cases of puerperal fever, slight and severe, it is also impossible to doubt that a certain not altogether inconsiderable proportion do arise from auto-infection. So many investigations into the bacteriological constituents of the vaginal secretion of pregnant women have already been made that we did not think it necessary to re-investigate this subject and we think that an impartial review of all the work which has been carried out and published with regard to this matter will convince most obstetricians that the vagina and cervical canal of the pregnant woman may contain bacteria which are potential causes of puerperal fever. And, given the presence of such bacteria before labour, in the cervical canal especially, it is obvious that infection of the cavity of the uterus, or of lacerations of the cervix itself, must occur from time to time.

We have, however, made a bacteriological examination of the cervical secretion in 30 non-pregnant women with more or less catarrh of the lining of the canal in order to ascertain whether the bacteria which are to be found in the secretion in cases of slight disease are such as may be a cause of puerperal fever. As the result of our examination we found several bacteria which have already been referred to as being found in the uterus in cases of puerperal fever. Thus, we have found in both the cervical canal of non-pregnant women and in the puerperal uterus the staphylococcus pyogenes aureus, the staphylococcus pyogenes albus, the "diphtheroid" bacillus which we have described, a diplococcus which did not stain by Gram's method and was not the micrococcus gonorrhœæ, and another diplococcus which corresponded in every particular except pathogenicity for lower animals with the micrococcus pneumoniæ. We also found the micrococcus gonorrhœæ in the cervical secretion, although we have not been able to demonstrate[1] its presence in the uterus in any of our puerperal cases. Having regard to these results of the examination of 30 women, taken at random from amongst patients who complained of suffering from "whites," we think that it is obvious that opportunity for auto-infection must be of fairly frequent occurrence and it is probable that a very definite proportion of the cases of puerperal fever, of a mild type at any rate, arise in this way.

Conclusions.—We may now briefly refer to some points of practical interest which are suggested by the results of our investigation. In the first place it seems obvious that the old classification of cases of puerperal fever into sapræmic, septicæmic, and pyæmic has but little value; a comparison of clinical observations with bacteriological findings shows that it is practically impossible to distinguish between cases of septicæmia which are, for the time, of a mild type and cases of "sapræmia," using the latter term in what we apprehend to have been the sense in which it was formerly used in this connexion. And bacteriologically the distinction between a case of septicæmia and one of "sapræmia," or toxæmia as we would now term it, is often extremely indefinite. Whilst no really useful and at the same time concise scheme for the classification of a class of diseases presenting the variety of features which is presented in puerperal fevers is practicable, the following scheme at any rate indicates the main pathological processes concerned in the production of the symptoms of these infections:—

I. Infection of lacerations of the perineal tissues or of the vaginal wall (sometimes with direct extension by continuity of surface to the cavity of the uterus).	1. Localised infection + toxæmia. 2. Localised infection + toxæmia + generalised infection.
II. Primary infection of the contents of the uterus or of the placental site.	1. Localised infection + toxæmia. 2. Localised infection + toxæmia + generalised infection.

We have already said that perhaps the chief point which presents itself amongst the results of our investigation is the predominating importance of streptococcic infection in the causation of puerperal fevers. Thus, referring once again to the results of our bacteriological examinations, it will be seen that out of 14 cases of puerperal fever which ended in death, 10 were cases of streptococcic infection; that in 26 severe cases which ended in recovery there were 16 patients who had a streptococcic infection of the uterus and two who showed streptococci in the vaginal lochia only, whilst none of the 14 cases of "slight" fever (temperature not rising above 102° F.) had a streptococcic infection. And the next most important organism was micrococcus pneumoniæ, which accounted for three out of the four other deaths, whilst the cause of the remaining death remained uncertain. Infection by various strains of streptococci or by micrococcus pneumoniæ was present in 33 out of 40 cases of severe puerperal fever (Groups A and B), and these organisms may be held responsible for 13 out of the 14 deaths which occurred (Series A). And between streptococci generally and micrococcus pneumoniæ there are such close affinities with respect to pathogenic action that, apart from the question of specific antitoxic serum treatment, the same general treatment may be regarded as applicable to either.

We think, therefore, that we are justified in laying it down as a general rule that in the absence of a definite bacteriological diagnosis the safe course for the practitioner to adopt is to deal with every case of puerperal fever in which the temperature rises above 102° F. as if it were a case of streptococcic infection.

With regard to the question of the special antitoxic treatment of streptococcic infection there is very little that need be said now, the more especially so as one of us has recently dealt with the matter at some length.[2] We believe, however, that more than one species of streptococcus is met with in puerperal infections and that for serum treatment to be applied with any reasonable hope of success under present conditions a polyvalent or compound serum from a horse immunised against the various strains of streptococci which are met with in puerperal infections is necessary. And we believe that by the use of such a compound antistreptococcic serum, recently obtained from the horse and used in sufficiently large doses, a considerable reduction in the mortality caused by streptococcic puerperal fever could be effected.

The next point which we have to consider is the question of active curettage of the uterus in cases of puerperal infection. In the case of either a streptococcic or pneumococcic infection of the uterus, with or without secondary infection by other bacteria, this procedure would seem on the one hand to be incapable of doing any good, and on the other hand might be productive of most serious result by infecting the hitherto intact deeper tissues of the uterine wall. Nor, again, is it probable that in cases in which the uterus is invaded by bacteria which, unlike the streptococci and micrococcus pneumoniæ, have little tendency to infect the deeper layers of the uterine tissues, the operation is likely to effect any definite good by removing all infection, however thoroughly the curettage may be carried out. We consider, therefore, that the use of the curette should be absolutely discarded in the treatment of puerperal uterine infection.

[1] Full details of this series of cases will be found in the Transactions of the Obstetrical Society of London, 1905.

[2] The Treatment of Streptococcic Puerperal Fever by Antitoxic Serum, THE LANCET, Dec. 31st, 1904, p. 1823.

The results of the treatment of some of the cases of streptococcic infection which have been dealt with in this paper have been such as to suggest that the best local treatment to adopt is that which is now commonly carried out in this country at the onset of puerperal fever—digital exploration of the uterus, the removal in this way of any retained fragments and subsequent douching of the cavity of the uterus with an antiseptic solution. A clinical fact of some importance is that, although invasion of the uterus by streptococci is marked by a sharp rise of temperature and other symptoms of some severity, the fever may be transient, subsiding within 48 hours without any special treatment. This fact is one that may be usefully remembered when tracing the conveyance of infection in puerperal cases.

The last matter which we have to refer to is the question of preventive measures which can be taken against the risk of auto-infection, the use more especially of vaginal douching with antiseptic solutions before the commencement of labour. We have the strongest doubts as to the effect of any such douching upon bacteria located in the cervical canal, such as those which we found in the cervical secretion of non-pregnant women, and regard the procedure as generally a useless one. But at the same time the objection which has been urged against it, that by means of it bacteria may be conveyed from the vulva to the upper part of the vagina, appears to be without good foundation.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A REMARKABLE CASE OF STRANGULATED HERNIA.

BY H. E. BARRETT, M.R.C.S. ENG., L.R.C.P. LOND.

THE following case will probably prove interesting to some readers of THE LANCET.

I was recently called to see a man, aged 77 years, whom I found dead on my arrival. I made a post-mortem examination which showed general peritonitis caused by a strangulated hernia, the gut being gangrenous, perforated, and united to the bottom of the sac by recent adhesions. The hernia, which was of the oblique inguinal variety, had not reached the scrotum. From the perforation there protruded what at first sight appeared to be a mass of fæces but on slitting up the intestine and removing this I found that it was a portion of newspaper apparently carefully folded up to about the size of a domino but slightly thicker, forming a hard angular mass; this was lying in the strangulated loop of intestine. Just above it there was another rather smaller piece also folded. They both had a very slight fæcal envelope. At the inquest it came out that the deceased had suffered from chronic constipation and I think it is not improbable that the paper might have been swallowed in the hope of obtaining an action of the bowels. The friends could throw no light on the matter. The paper when unfolded proved to be about a quarter of a sheet of the *Star* newspaper, the printing being none the worse for its journey through the stomach and small intestines. The hernia was an old-standing one. According to the friends there were no symptoms necessitating medical attendance, except a slight "bellyache" during the night on which the man died.

Holland Park-avenue, W.

NOTE ON A CASE OF OBSTRUCTION TO THE THIRD STAGE OF LABOUR BY A CERVICAL FIBROID.

BY W. BAIN, M.B., B.S. LOND.

THE following case which occurred in the maternity department of the Middlesex Hospital presents some features that are interesting and uncommon.

The patient, a woman, aged 38 years, had had 12 children, the last one being two years old. When confined she was at full term and her pregnancy had proceeded normally. There was nothing to note about the first part of the labour beyond the fact that the size of the uterus and its irregularity suggested to the attendant the possibility of twins. The birth of the child took place naturally but was followed by fairly severe hæmorrhage which was, however, controlled by stimulation of the uterus and a hot douche. It was at this point that I was called in. The patient was very blanched and had a pulse of 140 which was soft and feeble. The placenta was still in the uterus. On palpating per abdomen the uterus was found to be fairly contracted and irregular in shape, a large prominence being felt on the left and another on the right.

On making a vaginal examination the passage of the finger through the internal os was prevented by a hard mass. On pressing in a direction almost directly forwards the obstacle was surmounted. The placenta was found to be imprisoned in the fundus of the uterus. With considerable difficulty and some renewal of the hæmorrhage it was delivered. The difficulty was rendered greater by the placenta being closely adherent to the uterine wall. After delivery the uterus contracted and the tumour was found to be a large fibroid situated in the posterior wall just above the internal os. The patient's condition after this was critical but after the infusion of two and a half pints of normal saline solution by way of the right median basilic vein she rapidly improved and made a good recovery.

The interest of the case lies in its demonstration of a well-known fact—the power which the uterus has of contracting and pulling a cervical fibroid above the presenting head. The subsequent sinking of the uterus into the pelvis caused the tumour to become an absolute bar to the passage of the placenta without help.

Middlesex Hospital, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

WESTMINSTER HOSPITAL.

A CASE OF ACUTE GLANDERS.

(Under the care of Mr. WALTER G. SPENCER.)

FOR the notes of the case we are indebted to Mr. M. J. Cromie, house surgeon.

A horse-keeper, aged 25 years, was admitted to the Westminster Hospital from an infected stable on Nov. 12th, 1904, at 8.30 P.M. A consultation between Dr. R. G. Hebb and Mr. Spencer at 11 P.M. lead to a surmise that the patient was suffering from acute glanders. On the following day Dr. Hebb found the bacillus mallei in cultivation. The patient died 33 hours after admission. Animal inoculations made at the Lister Institute proved the case to be one of acute glanders, the organisms being exceptionally virulent. A full consideration of the case exposes possibilities of infection and of such cases being overlooked.

The actual date of inoculation could not be verified. On Oct. 31st the patient fell while cleaning his stable and hurt his side to which a medical man applied a belladonna plaster. On Nov. 3rd he had pain and swelling of the left side of the face and went to a dentist who advised him to bathe his face in hot water and told him that an abscess was forming but no incision was made. He next saw two other medical men who told him that he had cellulitis and erysipelas. On Nov. 9th small hard lumps began to appear in the limbs in the neighbourhood of the joints, with pain in the joints, especially the knees. On this day, the 9th, the patient went to a hospital and on his out-patient paper was entered cellulitis of the face. An incision was advised, but as he could not be admitted and felt very ill he declined it. On the 10th the nodular swellings became red and inflamed and pustules appeared on the swollen face, the lips, and the buccal aspect of the lips and the cheek. The lips became black, nasal discharges commenced, and dyspnœa supervened. He was therefore taken to another hospital where

he was given a paper saying that he was suffering from cellulitis and cephalitis (*sic*). Finally he was taken in an ambulance to the Westminster Hospital.

With regard to the stables in which the patient worked, his relatives stated that about a year previously a large number (they said 80) of horses in the stables had become glandered and had been condemned after the use of the mallein test. Further, that at the moment there were in the stables certain horses to look after which men were specially employed but that the patient was not one of these. After the relatives had carried back the diagnosis a further application of the mallein test showed a number of horses (it was stated 32) to be glandered.

On admission to hospital the patient was restless, slightly delirious, but could still speak clearly and partly answer questions. The temperature was 103·4° F., the pulse was 126, and the respirations were 38. The face and neck were swollen on account of an aggregation of pustules which had become confluent into a honeycomb-like mass. The pustules occupied the left cheek, the angle of the mouth, and the adjacent buccal mucous membrane and gums. Blackish crusts covered the surface which was not producing much discharge. There was no phagedænic or other marked odour. Pus escaped from the left nostril which was partly blocked by crusts. The rest of the face and the neck were swollen, of a dark-purplish colour, brawny near the pustules, with a fairly well-defined advancing edge. Both the eyelids were swollen as well as the temporal half of the conjunctiva of the left eye. Scattered over the neck, the trunk, and the limbs were seen (1) small erythematous areas with a papule in the centre; (2) small pustules with red areola containing thin pus; and (3) small ulcers. The size of the pustules varied from that of a pin's head to that of a pea. Especially along the lines of the lymphatics of the limbs were seen subcutaneous elevations which proved on touch to be hard nodules of the size of a hazel-nut, more or less, some of which were breaking down, and forming subcutaneous abscesses. None of them, however, came to the surface during life. The joints were painful but not felt to be distended with fluid. No glandular enlargements in the neck, the axillæ, or the groin were noted. The patient gradually became restless, sank, and died 33 hours after admission. Shortly before death he was breathing 68 to the minute, he had a pulse of 148, and a temperature of 99·6°.

Necropsy.—A post-mortem examination made by Dr. Hebb showed besides the superficial appearances above noted that the left cheek was swollen by inflammatory œdema and exudation, with abscesses in the skin and muscles. The muscles all over the body were the seat of numerous abscesses containing a thick sanious pus. The joints were normal. The mucosa of the nose and adjacent sinuses was much swollen and that covering the inferior turbinated bone resembled an aggregation of papillomata. But it is especially to be noted that there was no ulceration of the nasal mucous membrane. The lungs were engorged and the seat of numerous abscesses. Engorgement without abscesses was present in the spleen, suprarenals, and kidneys.

Bacterial observations by Dr. HEBB.—Films from the superficial pustules showed the bacillus mallei mixed with staphylococci, and cultures from the superficial abscesses were mixed, but pure cultures of bacillus mallei were obtained post mortem from the intramuscular abscesses. These cultures were sent to the Lister Institute.

Report from the Lister Institute by the Director.—The morphological and cultural characters of the organism correspond to the diagnosis of glanders. Inoculation of guinea-pigs resulted as follows: emulsion of agar culture 1·5 cubic centimetres intraperitoneally killed three guinea-pigs in 36 hours; 2 cubic centimetres of a similar emulsion given subcutaneously resulted in the animal's death in 40 hours. From these guinea-pigs the organism was re-obtained and gave the characteristic cultural reaction. The post-mortem appearances of the animals were not "characteristic" owing to the very rapid death of the animals but the main localisation of the organisms and inflammatory changes in the scrotum were well shown. The result shows that the organism is one of somewhat exceptionally high virulence.

Remarks by Mr. SPENCER.—This case brings to light that in a large stable an epidemic of glanders recurs from incomplete disinfection and from keeping horses doubtful enough for special men to be told off to attend them and yet which were worked without being periodically submitted to the mallein test. Immediately on admission to the hospital Mr. Cromie telephoned me such good reasons for his opinion that I went at once to see the man and after doing so fetched Dr. Hebb. Neither of us had seen a case of acute glanders but the superficial pustules and the chains of nodules forming abscesses along the line of the lymphatics enabled us to confirm Mr. Cromie's surmises as to the nature of the case. On the next morning Dr. Hebb found the bacillus mallei in film preparations. Some months ago he discovered the bacillus in a case of chronic bone abscess under the care of Mr. C. Stonham, the diagnosis being proved as in the present case by animal inoculation. The patient had escaped a correct diagnosis earlier; except for his occupation there was nothing to connect him with the infection. There must have appeared on the cheek at an early stage discrete pustules, in which presumably might have been found the bacillus mallei. When I saw the patient the confluent pustules had begun to honeycomb the cheek. It was certainly not a case of phagedæna, there were no sloughs or odour. The surrounding swelling, although bluish, was not dark enough for anthrax and there was no central eschar. I had had just before in the same room a boy with what we were taught to call Paget's carbuncle, sent up from Westerham by Mr. H. H. P. Cotton, with the history that it had started with a wasp sting. The condition of the cheek was not very different and there were pains in the joints. It proved to be a pure streptococcal infection; the boy rallied at once after streptococcal antitoxin injections. I do not think the appearances of the glanders could have been mistaken for small-pox. Possibly such a case after death might have been registered as one of pyæmia and septic pneumonia. The virulence of the organisms is emphasised by the report of the animal inoculations. It is noteworthy that not only were the sores infectious but the lungs contained numerous abscesses and the patient's breath must have been infectious. I requested the two nurses on duty to wear rubber gloves and masks, otherwise they would have been exposed to considerable risk. The absence of ulceration in the nose of the patient, also of testicular changes in the inoculated animals, is accounted for by the virulence and rapid course of the disease.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Actinomycosis of the Gall-bladder.—Adenoma of the Gall-bladder.—Description of a New Method for performing the Operation of Jejunostomy.—A Series of 123 Cases of Choledochotomy for Calculi in the Common Duct.

A MEETING of this society was held on April 11th, Sir R. DOUGLAS POWELL, Bart., the President, being in the chair.

Mr. A. W. MAYO ROBSON read an account of Actinomycosis of the Gall-bladder. He said that so far as could be ascertained by a search through medical literature bearing on the subject no case of actinomycosis of the gall-bladder had hitherto been recorded. The disease in this situation therefore was rare, though when it was borne in mind that no part of the body was exempt from the ravages of the fungus and that, next to the mouth and its neighbourhood, the abdomen was the most frequent site of disease it might have been reasonably expected that, like the appendix, the gall-bladder would occasionally have become invaded from the intestine. As in other successfully treated cases of actinomycosis, the treatment was at first surgical and subsequently medical. The history of the case was as follows. The patient, a man, aged 47 years, had for 18 months been losing weight and feeling ill; at first he had neither pain nor any signs by which he could localise his disease. After a time he began to have occasional attacks of pain in the region of the liver, but until three months before being seen by Mr. Mayo Robson the general symptoms of malaise only engaged his attention. For three months he said that he had never been a day free from bad attacks of colic and between these seizures there was a constant aching pain which he described as inflammatory and, in fact, the tenderness on the right of the

abdomen at first led to a suspicion of appendicitis. There had been neither jaundice nor vomiting and his bowels were regular. On palpating the abdomen a decided swelling was at once found beneath the right costal margin, extending two inches below the level of the umbilicus. The tumour was continuous with the right lobe of the liver, was tender on pressure, and felt hard and irregular. The stomach was somewhat dilated but no succussion splash was obtained. There was no jaundice and no evidence of ascites could be obtained. A diagnosis of cholecystitis was made and an incision was made through the right rectus on to the swelling, which was found to be an enlarged gall-bladder adherent to the abdominal wall, containing pus and granulation-like material, with here and there suspicious yellow particles in it. The abdominal wall was not invaded but the omentum, the gall-bladder, and the right border of the liver were intensely bound together and invaded by the same granulation-like tissue. By means of a blunt-edged scoop the cavity was scraped out and afterwards irrigated, a moderate-sized drainage-tube being inserted, and the rest of the wound was closed. The progress of the patient was uneventful and recovery was complete. Three years later he was still in good health.

Mr. MAYO ROBSON then narrated a case of Adenoma of the Gall-bladder. He said that condition had been described as a pathological curiosity. The only other cases of which he had been able to find a description were one under the care of Dr. L. R. Sutherland, the specimen being in the museum of the Western Infirmary, Glasgow; one under the care of Wiedmann, referred to by Terrier and Auvray; and one described by Mr. Stanmore Bishop in THE LANCET of July 13th, 1901, p. 72. The interesting point in the present case was that the tumour produced symptoms exactly resembling those of gall-stones, characterised by spasmodic pains in the region of the gall-bladder, transient icterus, and deterioration of health. These might either have been due to the tongue-like process of the growth acting as a foreign body, or to the chronic catarrh set up by the neoplasm. The case was as follows. The patient, a woman, aged 53 years, had been subject to attacks of pain beneath the right costal margin for some months, the seizures recurring frequently and being associated with slight jaundice. A physical examination showed a slight enlargement of the right lobe of the liver, but the gall-bladder itself could not be definitely made out. There was slight tenderness in the usual position an inch above, and to the right of, the umbilicus in a line between the umbilicus and the ninth costal cartilage. As the patient had been under medical treatment for gall-stones for some time without obtaining any relief an operation was advised. On opening the abdomen a thickened gall-bladder was found under cover of an elongated right lobe of the liver but no gall-stones could be felt either in it or in the ducts. On incising the thickened fundus the incision was made through a multilocular cystic tumour occupying the wall of the gall-bladder. It then became evident that the fundus of the gall-bladder was occupied by an adenomatous tumour. The loculi contained some particles of cholesterin. The cystic duct seemed to be narrowed and the remainder of the gall-bladder was small and thickened. Cholecystectomy was therefore performed in the following manner. The cystic duct was grasped within half an inch of the common duct by means of a pair of pressure forceps. The peritoneum of the duct was incised one-third of an inch above this and after stripping the peritoneum off the duct the duct was divided and ligatured close to the forceps. The peritoneum connecting the gall-bladder to the liver was divided one-third of an inch from its attachment to the liver. The gall-bladder was then separated from the liver by the finger, working from below upwards, leaving about one-third of an inch of its peritoneal covering connected to the margins of the gall-bladder fissure of the liver. The peritoneum covering the cut end of the cystic duct was then brought together by a ligature, so as to bury the ligatured duct. After this the peritoneal margins of the gall-bladder fissure were stitched together from side to side so as completely to obliterate the groove in the liver where the gall-bladder had been attached. As no soiling of the peritoneum had occurred and all oozing had ceased it was not thought necessary to adopt any drainage and the wound was closed in the usual way. The after-history gave nothing special to record. The wound healed by first intention, the patient lost all her pain, and she went home at the end of the third week.

Mr. MAYO ROBSON then gave a description of a new method for performing the operation of Jejunostomy and concluded by reading a paper on a Series of 123 Cases of Choledochotomy for Calculi in the Common Duct. He said that on March 25th, 1902, he had read a paper before the society on the Surgical Treatment of Obstruction of the Common Bile-duct by Concretions, with especial reference to the advantages of an operation for the more complete exposure and treatment of the deeper parts of the biliary passages. The operation was fully described in the Transactions of the society for 1902. When this operation was first employed the mortality of choledochotomy including every case, whether complicated or simple, was 16·2 per cent. (21·4 per cent. in the first series and 9·3 per cent. in the second series, or together 16·2 per cent.), but since adopting the operation for complete exposure of the bile passages a continuous series of 76 choledochotomies had been performed for gall-stones with only three deaths, a mortality of 3·9 per cent. In several cases gall-stones were found in the common duct where there was no jaundice, and unless careful examination of the common duct had been made the patients would have been unrelieved. On five occasions he had removed gall-stones from the common duct, although the patient would not confess to having had any pain, the operation being undertaken for deep jaundice associated with frequent rigors and high temperature. It had to be borne in mind that common duct cholelithiasis was, without operation, usually a fatal disease and that nearly every recovery was a life saved.—The PRESIDENT commented on the occurrence of gall-stones in the common duct without causing jaundice and asked Mr. Mayo Robson whether such was of frequent occurrence. He also asked what area of the surface of the liver it was necessary to use in forming the anastomosis between the abdominal wall and the liver for the relief of ascites. He further asked whether the capsule of the liver was removed in such operations.—Mr. J. WARRINGTON HAWARD said that he had not infrequently observed a gall-stone in the common bile-duct without jaundice. In a case of ascites due to cirrhosis of the liver on which he had operated he had formed an anastomosis between the two surfaces of about the size of the palm of the hand.—Mr. C. R. B. KEETLEY mentioned the case of a man with hydatid of the liver in which on opening the abdomen an abscess was found behind the gall-bladder containing pus and which after being opened discharged bile. He sought to explain the condition by the ulceration of a stone from the common duct into the abscess cavity.—Mr. MAYO ROBSON, in reply, said that he had seen numerous cases of stone in the common duct without jaundice and he thought the explanation lay in the fact that the stone did not completely close the dilated duct. He thought that the most unusual feature in these cases was the absence of pain, and he also thought that from two to three inches of the surface of the liver should be used in forming an anastomosis. He had never removed the capsule of the liver but he had done so with regard to the kidney.

MEDICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on April 10th, Mr. JOHN LANGTON, the President, being in the chair.

Dr. T. D. SAVILL exhibited a case of Paralysis of the Left External Pterygoid Muscle with Tremor of the Lower Jaw in a man aged 51 years. When he opened his mouth the lower jaw moved downwards and to the left. Possibly the internal pterygoid was also involved. There was also a constant rhythmical tremor of the jaw unless it was widely open or tightly shut, and to keep the jaw still the patient habitually kept a piece of wood between his teeth. The jaw jerk was increased considerably. There was no anæsthesia, loss of taste, or other symptom referable to the fifth nerve. The cause of the paralysis and tremor was obscure, but they had supervened about five years ago, about a year after a large number of bad teeth had been removed, the alveolus of the lower jaw on the left side being now notably wasted.—Mr. F. C. WALLIS had met with a similar case in a man who suffered from trigeminal neuralgia. On careful examination a few drops of pus were found to issue from a small hole in the jaw, from which one or two stumps were extracted, and the man got well.—The PRESIDENT remarked on the fact that the nerve to the external pterygoid was not near the teeth in the lower jaw and this suggested that the lesion of the nerve might be of reflex origin.

Dr. SAVILL also exhibited a case of Symmetrical Keratodermia Palmaris in a girl, aged 18 years, which had supervened about the age of 14 years.

Mr. WALLIS exhibited a case of Excision of the Rectum for Carcinoma Recti in a man, aged 72 years. He was quite well until eight months before admission to St. Mark's Hospital, when he had "stoppage of water" which was followed by diarrhœa. The rectal examination revealed an ulcerated growth mainly in the posterior wall but extending on to the anterior wall. At the operation on Jan. 28th, 1904, a skin incision was made from the fourth sacral spine and the coccyx was removed, the sphincters being left untouched, and a portion of the sacrum was taken away by bone forceps. The rectum was freed above and below the growth and a stout silk suture was passed round the bowel above the growth and the rectum was divided and turned down and again divided below the growth, about three inches of bowel being removed altogether. The patient made a good recovery and was discharged at the end of three weeks with a sacral opening from the bowel. He was re-admitted on May 9th, when an ineffective attempt was made to close the sacral opening. He was again admitted on Oct. 10th as the want of control caused him great mental distress and at the operation the bowel was freed from its attachment round the sacral opening and separated upwards for about three inches. The distal part of the mucous membrane between the anus and the sacral opening was entirely removed and the bowel above was brought down to the anus and stitched to the skin. The patient made a good recovery and he now possessed a practically normal rectum with perfect sphincteric control.—The PRESIDENT congratulated Mr. Wallis on the excellent result of the operation which was a difficult one to perform.—Mr. CHARLES RYALL remarked on the operation of sacral excision of the rectum and believed it gave an excellent result of sphincteric control. He mentioned a case in which a plastic operation had been performed.—Mr. L. B. RAWLING thought that in general the results of such operations were not encouraging and asked Mr. Wallis whether he thought a preliminary colotomy was advisable in such circumstances.—Mr. WALLIS replied that he believed a preliminary colotomy was not altogether advisable. To control the hæmorrhage hazeline was useful—one drachm to a pint of water at about 100° F.

Dr. C. W. CHAPMAN exhibited a case of Intrathoracic Aneurysm in a man, aged 34 years. He complained of pain in the chest which ran down both arms. He had had a venereal sore at the age of 20 years, fever in India at 21 years, and influenza two months before admission. There was pulsation over the second left interspace near the sternum. The dulness occupied the second and third left interspaces and extended nearly two inches to the left of the sternal margin. Examined by the x rays the whole swelling was seen to be pulsating. There was a faint systolic murmur to be heard in the aortic area and a diastolic aortic murmur, loudest at the lower part of the sternum and to the left, the latter murmur being accompanied by a diastolic shock. A systolic murmur could also be heard in the right interscapular region. There was hæmoptysis early in March which subsided on the patient taking absolute rest for a few days. Since leaving the hospital in July he had resumed his work of making gelatin capsules. The pains had subsided under increasing doses of iodide of potassium and complete rest.—Dr. SEYMOUR TAYLOR expressed the view that the aneurysm involved the third part of the aorta and commented on the advantage to such patients of continuing their occupations.—Dr. H. E. B. PORTER referred to a case which illustrated the advantage of keeping such patients at work.

Dr. CHAPMAN also exhibited a case of Mitral Stenosis in a woman, aged 74 years, which had existed since 17 years of age.—Dr. J. F. H. BROADBENT queried the existence of a progressive lesion like mitral stenosis for all those years and suggested that the symptoms in early life had been due to dyspepsia.—Dr. ALEXANDER MORISON referred to a case in which aortic stenosis had existed from the age of 14 to that of 74 years.—Dr. TAYLOR also referred to a similar case and thought the rule that mitral stenosis was progressive was not without exception.

Mr. S. MAYNARD SMITH exhibited a case of Osteitis Deformans in which the disease was present in father and son. The patient, a male, aged 42 years, had noticed bending of the legs for two or three years and during the same period had suffered from "rheumatic" pains in the back and the lower limbs. He presented well-marked enlargement and curvature of the femur and tibia in each leg and to a less extent of the fibula. There was thickening of the right clavicle with increase in its normal curve. The spine and the acromion process of the left scapula were considerably enlarged; kyphosis was also present. The radius and the ulna were unaffected. There was no definite evidence of any change in size of the cranial bones. The head, however, appeared large, but this enlargement affected the facial as well as the cranial bones. The father of the patient, aged 74 years, was now in Camberwell Infirmary and presented similar symptoms. In 10 out of 64 cases which Mr. Smith had collected there were evidences of the same disease in the parents.

Dr. F. PARKES WEBER communicated a case of Pneumothorax in a woman, aged 28 years, who had been operated on by resection of part of the seventh rib on Jan. 27th, 1902, and who was progressing very favourably. The patient had been living in her own home and doing her ordinary household work for a long time. The pulmonary condition remained fairly good and there was no albuminuria, though the fistula in her side still remained open and discharged slightly. When the patient had been in the German Hospital the tuberculin test gave a positive result, a typical febrile reaction following the injection of two milligrammes of Koch's old tuberculin, but otherwise there had not been really definite signs of tuberculosis.

Dr. EDMUND CAUTLEY exhibited a case of Abdominal Tumour in a man, aged 32 years, complaining of pain in the left side of the abdomen and vomiting. The abdomen was larger on the right than the left side but it moved well during respiration. On palpation there was a hard, movable, tender lump, dull on percussion, situated in the left lumbar region.—The PRESIDENT believed that the tumour was malignant and probably connected with some part of the large bowel and this opinion was endorsed by Mr. WALLIS, Dr. BROADBENT, and others.

Dr. LEONARD G. GUTHRIE exhibited a case of Rheumatic Endocarditis with unusually plentiful subcutaneous nodules in a girl, aged 13 years. In March, 1903, she was admitted into the Children's Hospital, Paddington-green, with acute rheumatism of about a week's duration and with peri- and endo-carditis of the mitral valve. Small nodules were then present on the elbows, the knuckles, and the knees; these had diminished in size but had not disappeared on her discharge from hospital three months later. The nodules now present varied in size from that of a small shot to that of a pea and were distributed in large numbers above the superior curved line of the occiput and on the sternum, the elbows, the knuckles, the backs of the hands and feet, the knees, and the ankles. They were freely moveable and mostly situated in tendon sheaths.

Dr. MORISON exhibited three cases of Heart Disease in Children. The first was that of a boy, aged eight years, the subject of mitral regurgitation, probably not of congenital origin. The second was that of a girl, aged ten years, with mitral stenosis, in whom the family history exhibited a marked record of heart disease. The third case was that of a boy, aged ten years, with double aortic disease, probably associated with some mitral constriction, Flint's murmur being present.—Dr. CAUTLEY thought that the first of these cases was one of congenital cardiac disease.

Dr. J. WALTER CARR exhibited a case of Cerebral Diplegia in a youth 18 years of age. That it was a case of cerebral diplegia was indicated by the history of symptoms extending back to early childhood, by the slightly spastic condition of the legs, the tremor of the arms, the nystagmus, the optic atrophy, and the mental impairment. The condition was probably due to some ante-natal intracranial lesion, but the possibility of the disease having commenced after birth could not be excluded as the patient was said to have had convulsions in infancy.

OBSTETRICAL SOCIETY OF LONDON.

Development and Retrogression of the Corpus Luteum.—Abdominal Hysterectomy for Concealed Accidental Hæmorrhage.—Calcified Tumour in Douglas's Pouch.—Uterine Fibroid in a Patient, aged 20 Years.

A MEETING of this society was held on April 5th, Dr. W. R. DAKIN, the President, being in the chair.

A demonstration, with lantern illustrations, was given by Dr. CUTHBERT LOCKYER on the Development and Retrogression of the Corpus Luteum, special reference being made to the compound lutein cystomata found in association with vesicular mole and chorio-epithelioma.—

Dr. H. WILLIAMSON, speaking from his own observation, while agreeing in all essential particulars with Dr. Lockyer, looked upon the fibrinous lining of these cysts not as a mere deposit of fibrin from the central blood clot but as a greatly hypertrophied membrana propria. Nor did he believe that the lutein cells migrated from distant corpora lutea but that they arose *in situ* from modification of the stroma cells. He pointed out that the pigment lutein was not a derivative of hæmoglobin but a lipochrome.—Dr. G. F. BLACKER thought that the importance of the subject was very great and that the corpus luteum might well be said to be the fashion at the present time. That an excess of lutein tissue was present in many cases of vesicular mole and chorio-epithelioma was certain but that it bore any relation to the origin of such conditions was by no means settled. Seitz had examined 36 ovaries at different stages of pregnancy and had found in practically all of them an excess of lutein tissue such as Dr. Lockyer had described. If further observations of this kind showed that such a hyperplasia was to be found in all cases of normal pregnancy then the view that the corpus luteum played any part in the production of either a vesicular mole or a chorio-epithelioma could hardly be sustained. He inquired whether control observations had been carried out on the ovaries in cases of normal pregnancy or in cases of fibroid tumours, as a very large series of such observations must be undertaken before it could be said that the presence of an excess of lutein tissue together with a vesicular mole or a chorio-epithelioma was more than a mere coincidence.

A short communication on Abdominal Hysterectomy for Severe Concealed Accidental Hæmorrhage was read by Mr. J. H. TARGETT who described the following case. The patient, aged 34 years, had had seven children and severe ante-partum hæmorrhage on the last two occasions. Bleeding commenced when at the sixth month of pregnancy. The membranes were artificially ruptured and a leg of the fœtus was brought down. As no progress towards delivery was made and the patient's condition was becoming worse, the vagina was plugged with gauze and the woman was removed to hospital. Saline injections were given per rectum. The uterus, which at first reached to the level of the navel, appeared to have become more distended, was irregular in outline, tense, and, in spite of the opium which had been given, was tender to the touch. The cervix was rigid. Supravaginal hysterectomy was decided on as offering the quickest method of emptying the uterus and of controlling the hæmorrhage. Intravenous injection of saline fluid was given and some was left in the peritoneal cavity. The pulse improved. Convalescence was complicated by a small parametric abscess in front of the cervix and by thrombosis of the left leg followed by thrombosis of the right.

Dr. A. H. N. LEWERS showed a specimen of Calcified Tumour in Douglas's Pouch apparently unconnected with the Uterus which he had removed by abdominal section from a woman, aged 34 years, who was the mother of three children. The tumour measured two and a half by one and a half by one and a half inches. The surface was irregular and completely calcified for a depth of one-sixteenth of an inch. The interior was tough and the section presented a greyish-white appearance. The tumour was regarded as probably a fibroid of the uterus which had undergone extreme hyaline degeneration and necrosis with calcareous deposit on the surface. There was nothing to indicate its previous point of attachment.

A specimen of Uterine Fibroid in a patient, aged 20 years, shown by Dr. H. RUSSELL ANDREWS, was removed by hysterectomy from a young woman at the London Hospital. She had been married about a year and had had one miscarriage. On account of the tumour the abdomen had been opened at a special hospital four months previously. Menstruation had continued regularly. The tumour, after the exploratory operation, increased rapidly in size. It was smooth and elastic, reaching at least half-way from the umbilicus to the ensiform cartilage. A sound passed four and a half inches. The uterus contained one large interstitial fibroid on the right side and weighed four pounds five ounces. The tumour had undergone myxomatous degeneration.—Mr. ALBAN DORAN asked whether the ovaries had been left, as he thought was specially desirable in a patient so young.—Dr. C. J. CULLINGWORTH said that from a diagnostic point it was important to remember that fibroids did sometimes occur in young subjects and that when that took place they were often found softened by degeneration or by œdema.—Mr. W. GANDY mentioned a case of fibroid in a young woman, aged 28 years, which was expelled piecemeal after incision of the cervix.—Dr. RUSSELL ANDREWS, in reply, mentioned that both ovaries appeared to be healthy and were therefore not removed and that the uterine wall was so thin over the tumour that the case was unsuited to myomectomy.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Painless Hæmaturia.—Purulent Collections.

A MEETING of this section was held on March 24th, Mr. ARTHUR CHANCE, the President, being in the chair.

Mr. K. E. L. G. GUNN read a paper on Painless Hæmaturia, showing the difficulty in making an accurate diagnosis in these cases and giving a short account of five cases of painless hæmaturia which had passed through his hands during the last few months; all had the common symptom of blood occurring in the urine but in each case the cause of the hæmorrhage differed and could not in all probability have been discovered without the use of the cystoscopes for investigation and for ureteral catheterisation, both of which were demonstrated. The great importance of finding out accurately the functional capacity of both kidneys in cases where it might be advisable to remove one kidney was also discussed and the method of doing this by means of Professor Luys's segregator and the cryoscopic examination of the separate urine was fully explained and examples were given of the value and accuracy of the method both as regards prognosis and treatment. The hæmaturia in the first case was believed to be due to an angiomatous condition of the papillæ of the left kidney, all the other likely causes of bleeding being excluded one by one, but as the patient refused any operation the diagnosis was not confirmed as it was in the remaining four cases. The hæmaturia in the second case was due to a severe degree of interstitial change in the left kidney, the right being healthy and secreting, after the removal of the diseased left kidney, from 40 to 50 ounces of healthy urine during the day; in the third case it proceeded from chronic tuberculous ulcers of the bladder, several of which bled when the bladder was gently distended through an irrigation cystoscope; in the fourth case the cause was an adenoma of the left kidney, which was removed by operation; while the last case was one of carcinoma of the prostate invading the bladder wall, part of which was successfully removed with the diseased prostate.—Mr. EDWARD H. TAYLOR said that in a case recently under his care he had obtained very valuable information concerning obscure bladder symptoms with Mr. Gunn's assistance. Cystoscopy and ureteral catherisation appeared to be methods of investigation requiring such a high degree of technical skill as to belong to the specialist rather than to the general surgeon.

Mr. ROBERT H. WOODS read a paper in which he discussed the laws governing the formation of Purulent Collections and the way in which those laws affected surgical treatment. In the first place he dealt with abscesses in soft tissues; secondly, with those in which one wall of the cavity was fixed; and thirdly, with purulent collections inside fixed walls. From theoretical considerations he arrived at the conclusion that the correct way in which to treat empyema of the pleura was not by dependent drainage and subsequent resection of the chest wall when necessary but by applying negative pressure to the pleural cavity and obviating the tendency of the lung to retract. He had designed an apparatus which was intended not for the treatment of localised empyemata but for the more extensive kind in which the general pleural cavity was involved. He did not consider that it would be of use when the pleura was much thickened. In discussing multiple sinusitis Mr. Woods mentioned that after performing the radical operation on the antrum of Highmore, according to the Caldwell-Luc method, he had on three occasions grafted the inside of the antrum by Thiersch grafts with good results.—Mr. G. JAMESON JOHNSTON said that he did not agree with Mr. Woods regarding the treatment of abscess in the tibia but he hoped that the apparatus devised by Mr. Woods for the treatment of empyema would prove workable, as he considered Estlander's operation open to many objections.—Mr. E. H. BENNETT, Mr. TAYLOR, and others also discussed the paper.

SOCIETY FOR THE STUDY OF INEBRIETY.—The quarterly meeting of this society was held on April 11th in the rooms of the Medical Society of London, Dr. Harry Campbell, the President, being in the chair.—Dr. Stanley B. Atkinson, barrister-at-law, opened a discussion on the Medico-legal Relations of Intemperance. He said that forensic medicine was the science and art of medical evidence. Most cases involving intemperance which came before the law courts were unreported, for they turned on some question of fact which, once having been adjudged by the jury, was not likely to form a precedent. There were, however, many points of law which a judge had to consider when dealing with persons "under the influence of drink." How far was that condition an excuse? How far was it an aggravation of the alleged offence? What was a habitual drunkard? How far did the lunacy laws operate upon inebriates? Forensically, there were three classes of intemperate citizens: 1. The police-court inebriate, who was usually set at liberty after a fine had been paid; occasionally he might be dealt with as a habitual drunkard. 2. The man who wished to be relieved by the court from the legal consequences of some untoward conduct during a fit of drunkenness which led to a criminally or civilly obnoxious result. The law presumed that a man was sober and he who affirmed the contrary must prove his allegation. 3. Whenever excessive drinking had been medically certified to be the cause of death the coroner should be informed of the fact of poisoning. It was very difficult to define what actually constituted drunkenness. A full clinical test should be applied to each case. The contemporary physical and mental health and the quality of the beverage would cause variations—a fact which helped to explain the different manifestations in men and in women. To three classes of the community the definition and the tests of drunkeness were especially important—namely, (1) the publicans, who must not allow a drunken person to be on their licensed premises; (2) the police, who were adepts in shifting responsibility by "sending for the doctor;" and (3) the medical man, who, at times, after considerable delay, became the final referee. It was judicious on the part of a medical man to give the patient the benefit of any doubt and tentatively to treat him as if suffering from a serious disorder unless and until its fleeting nature was proved. The past history, recent or remote, must not deceive him, either in dealing with the pre-comatose irritative stage or with the "dead drunk." There was no golden rule for testing drunkenness; abnormality in mental and in statical conditions was the most easily tested. It would appear from the wording of the Habitual Drunkards Acts that they referred only to the victims of alcoholic intoxication. Further, the Lunacy Acts did not embrace the inebriate as such; a man suffering from delirium tremens was not within their scope. Lawyers have long regarded drunkards as legally responsible for their moral irresponsibility. A few exceptions, however, were tolerated. Actual contemporary drunkenness, if proved, might excuse the unconscionable effects of a contract, or reduce a will, for in such instances the respective *consensus* and *animus testandi* were obviously absent. In criminal law no excuse was allowed unless delirium tremens was proved to have affected the passionate offender; but here also a few exceptions were tolerated, as for instance where a man was unwittingly drugged.

LIVERPOOL MEDICAL INSTITUTION.—The last meeting of this society for the session was held on April 6th, Dr. James Barr, the President, being in the chair.—Dr. W. Blair Bell explained his method of Mounting Specimens of Appendices in Clear Formalin Gelatin.—Mr. D. Douglas-Crawford showed an Appendix containing a Large Concretion. Beyond pain referred along the iliac branch of the ilio-hypogastric nerve no other symptoms were present.—Mr. C. H. B. Shears and Mr. E. M. Stockdale showed an Endothelioma of the Retina from a boy, aged three years. The sections demonstrated its origin from the retina showing the neuro-epithelioma.—Mr. R. C. Dun exhibited an Enteric Intussusception which had become gangrenous and irreducible and had been removed from a boy, aged four years. He considered enteric intussusceptions rare.—Mr. W. Thelwall Thomas, however, regarded this form as the usual one in children.—Mr. Dun also showed a Congenital Stricture of the Œsophagus from a child, aged three years. 17 months before death a gastrostomy had been performed.—Mr. Rushton Parker considered that this was an instance of maldevelopment.—Mr. Thelwall Thomas and Dr. E. Cleaton Roberts showed sections of a Non-traumatic Cyst of the External Ear, demonstrating the origin in primary degeneration of the cartilage itself.—Dr. W. Alexander and Dr. R. E. Kelly showed Sections Stained in Various Ways of a Portion of the Pre-Rolandic Cortex from the brain of an epileptic; they exhibited a nævoid condition of the vessels surrounded by old pigment and great atrophy of the white matter and corresponding cortex.—Dr. John Hay showed stained specimens of the Blood from a case of supposed Trichinosis. There was a leucocytosis of 20,000 and 24 per cent. of the white cells were eosinophiles.—Dr. J. Hill Abram demonstrated a Myositis in a patient whose symptoms had been attributed to eating sausage and in which the diagnosis of trichinosis was probable.—Dr. W. B. Warrington and Dr. F. Griffith demonstrated the existence of Fibres in the First and Second Dorsal White Rami of the Cat, the cells of origin of which were in the spinal ganglia.—Dr. R. J. M. Buchanan showed a series of lantern slides illustrating the Changes in the Blood in Spleno-medullary and Lymphatic Leucocythæmia with especial reference to the effect which the x-ray treatment had on the white cells. He regarded the leucocytosis of leucocythæmia and inflammatory leucocytosis as being essentially of the same order.—Dr. John Hay dissented from this view.—Dr. H. Briggs showed a large and beautiful series of Drawings and Paintings illustrating the Histology of Endometritis, Adenoma, and Early Carcinoma Uteri and discussed the value of the microscope as an aid to diagnosis in these conditions. Dr. Briggs and other speakers considered that not too much reliance could be placed on the examination of curettings.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on April 7th, Dr. Leslie Durno, Vice-President, being in the chair.—Dr. David Ross showed a man, aged 27 years, who 16 months ago was operated upon for appendicitis; three months ago he was delirious from acute pain over the left colon and then examination per rectum gave intense pain at one spot. He is unable to follow his employment. He now wakes with pain in the morning and vomits "from the pain." The treatment by agreement of opinion advised was a reopening of the abdomen.—Dr. Alexander Morison read a paper on Fainting and "Sudden Death" under Exertion and in Allied States. In it, he said, the pulse and heart under exertion have quickened and increased in force; unless the right heart kept pace with the need of the systemic circulation blood to the nerve centres was diminished or absent from which fainting or death resulted; fainting, if by help from without or automatically the blood balance were restored; death, if that lost balance remained. He illustrated the argument by relating a case of a man, aged 35 years, who after a short swimming match sank and was taken out of the bath dead. At the necropsy it was found that death was due to heart failure; the right heart was distended with blood, the left was empty and contracted. There was slight fatty degeneration of the muscle fibres. Perhaps the most important form of fainting after acute conditions involving exhaustion was that associated with unconsciousness following severe convulsions from any cause. In that the resulting state resembles the condition consequent upon severe physical exertion leading up to exhaustion. Dr. Morison compared the vascular condition of acute pneumonia with the above and expressed his belief that the cardio-vascular stress in pneumonia resulted from the pyrexia and not from the obstruction of the lung. A lesson is to be learned from the depleted left and repleted right heart, which is the need for venesection aided by strychnine and rhythmical traction of the tongue. He illustrated that point by quoting two cases which were markedly relieved by venesection though death followed in the one case on the next day and in the other in three months while at physical exercise. A discussion followed, to which Dr. Morison replied.—Dr. Durno showed a Heart from a man, aged 70 years, who had died suddenly. He had had recurrent gouty arthritis and dyspnœa on exertion. The left heart was empty. The aortic valves were competent but calcareous; the mouth of one coronary artery was narrowed by the chalky deposit, and the aortic arch was markedly atheromatous.

PATHOLOGICAL AND CLINICAL SOCIETY OF GLASGOW.—A meeting of this society was held on April 10th, Dr. Henry Rutherfurd being in the chair.—Sir Hector C. Cameron showed a patient suffering

from Actinomycosis. When first seen there was a large swelling of the right cheek, apparently unconnected with the jaws. An abscess formed from which a large quantity of pus was evacuated, in which the characteristic organisms were found. At a second operation, some time later, scraping brought to light a grass seed (the species of which could not be exactly determined) which doubtless was the bearer of the infection. How it had entered the cheek was not clear but at any rate it had come from within the mouth.—Mr. J. R. Riddell showed a series of patients illustrating the Effects of Treatment with the X Rays. This included two cases of round-celled sarcoma, six of rodent ulcer, one of epithelioma of the lip, four of lupus, and two of keloid. The results on the whole were very satisfactory.—A joint communication on the subject of Glanders in Man was introduced by Dr. R. M. Buchanan.—Dr. A. K. Chalmers spoke of the prevalence of the disease in various stables in the city and the public health and economic conditions related thereto.—Dr. J. W. Anderson read notes of three cases in man; Dr. J. Cockburn Syson read notes of one case in man; Dr. Buchanan demonstrated the pathology of the disease by microscopic and museum preparations from man and the horse; and Mr. J. R. McCall, M.R.C.V.S., spoke of the rapid increase in the number of cases, the value of the mallein test for purposes of diagnosis, and the necessity of obtaining further powers to prevent the spread of the disease, and gave reasons for believing that it was reponsible for more deaths among men than was generally supposed.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 6th, Mr. G. Morgan, the President, being in the chair.—Sir W. H. Broadbent read a paper entitled "Clinical Illustrations of Pseudo-Angina and Angina" which will be published in THE LANCET *in extenso*. He described the pain of angina usually coming on after exertion or exposure to cold, the determining antecedent being an increase in the blood pressure of the arterial system. He discussed the various theories of causation and remarked that the most constant post-mortem finding was an atheromatous and sclerosed condition of the coronary vessels. He then dealt with hysterical pseudo-angina and next pseudo-angina of gastric origin, characterised by attacks at night or at the same time each day, giving instances of the satisfactory results of treatment of the stomach condition. He next described true angina associated with aortitis, with aortic valve disease, with atheroma of the aorta and syphilitic disease, and with fatty heart. For treatment he advised a quiet life with simple diet, mercury and iodides to reduce the vascular tension and to promote the excretion of toxins, and amyl nitrite and nitroglycerin in attacks, with erythrol tetranitrate to ward them off.—Dr. Walter Broadbent showed the heart from a case of Acute Aortitis, the patient having died from angina less than a week after the first attack.—Dr. F. G. Bushnell showed microscopic sections of the Aorta and of the Heart Muscle from this case and also discussed the paper.—Dr. E. Mackey asked whether in attacks of angina inhalations of oxygen were of use, also whether potassium iodide really reduced vascular tension, and discussed several other points in the paper.—The President, Dr. E. Hobhouse, Dr. F. J. Paley, and Mr. V. T. Greenyer also joined in the discussion.—Sir William Broadbent having replied, Dr. W. A. Hollis proposed a vote of thanks for the paper and Mr. C. J. Oldham having seconded it the vote was carried with acclamation.

ROCHDALE AND DISTRICT MEDICAL SOCIETY.—A meeting of this society was held on April 6th, when Dr. W. H. Carse read a paper on Vaccination. After a historical introduction he discussed the bacteriology of the subject, the method of obtaining lymph from the calf, and the effects of glycerine and of chloroform vapour on the lymph. He described his own method of vaccinating and showed the instrument which he used—an unsplit pen-nib. Three months was the best age for vaccination but postponement might be necessary owing to various circumstances. Finally the complications which might occur after vaccination were described.—Dr. W. J. Hodgson, Mr. G. W. Malim, Mr. H. H. I. Hitchon, Dr. A. Wallace, and Mr. W. Pooley (the President) discussed the paper.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the Royal Kent Dispensary, Greenwich-road, on April 7th, Mr. G. Chisholm Williams occupying the chair.—Dr. F. Harrison Low opened a discussion on Radio-Therapeutics, giving a short description of the appliances necessary and the methods of using Finsen's lamp, the x rays, radium, and high-frequency currents. He discussed the cases suitable for the different methods and referred to some points in the medical ethics in connexion with radio-therapeutics and electro-therapeutics.—The President showed some slides in the lantern of cases treated by these methods.—Dr. G. H. Graham showed four cases of Lupus treated by Radio-therapeutics; and Mr. Willmott H. Evans showed a case of Keloid treated successfully by the x rays.—The discussion was continued by many of the members present.

Reviews and Notices of Books.

A Text-book of Medical Practice for Practitioners and Students. Edited by WILLIAM BAIN, M.D. Durh., M.R.C.P. Lond. With illustrations. London: Longmans, Green, and Co. 1904. Pp. 1011. Price 25*s.* net.

MANY text-books of medicine have made their appearance within the last few years; American writers in particular have shown keen industry in the desire to occupy territory already somewhat overcrowded and yet it has been eft to this country to produce a work of distinctly novel type. In all probability every clinical teacher continually refers to the elementary facts of anatomy, histology, and physiology in his demonstrations; it is convenient in addressing students to argue from the known to the unknown, to appeal to previous studies, and to encourage to further work by showing that medicine rests on certain foundations, even though to the beginner it may seem to be built upon the insecure basis of deductions drawn from the interpretation of physical signs. There is an inevitable contrast between the methods of the wards and those of the laboratories, and students who have passed the examinations in the earlier subjects are prone to turn with zest to the newer interests and to become absorbed in the keen acquisition of facts which seem to be more likely to influence the work of life. The teacher endeavours to counteract this tendency but it is to be feared that students rarely revert to the text-books which they have left behind them; life is too crowded, there seems so much to observe, so much to read, and the unity and the progressive character of medical training are apt to be ignored.

Considerations of this nature appear to have influenced the construction of this new text-book, since the separate sections are prefaced by articles on the salient facts of anatomy, histology, and physiology. These sections are contributed by Professor Arthur Robinson, late professor of anatomy at King's College, London, and by Dr. T. G. Brodie, professor superintendent of the Brown Institute, whose names afford sufficient guarantee of excellent work. The sections contributed by these authors are models of concentration and those dealing with anatomy are freely illustrated with clear diagrams from various sources. The medical sections are written by 14 contributors—Dr. Sidney Martin, Dr. C. O. Hawthorne, Dr. T. Wardrop Griffith, Dr. Alfred E. Russell, Dr. Percy Kidd, Dr. W. P. Herringham, Dr. Arthur Whitfield, Dr. J. S. Risien Russell, Dr. J. Dixon Mann, Dr. John Biernacki, Dr. C. Powell White, Dr. C. W. Daniels, Dr. J. Rose Bradford, and by the editor, Dr. William Bain. With so many different authors it is inevitable that the sections should be of unequal merit but in spite of the need of brevity the articles are generally both lucid and complete. In the section on Diseases of the Alimentary System, from the pen of Dr. Martin, we find much that is commendable and as an example of style and utility we would mention the admirable brevity with which he deals with the tongue as an index of disease; in less than

a page he has contrived to find room to mention nearly every deviation from the normal and yet the diction flows easily and does not suggest a mere catalogue. Another feature of this section is the fulness of detail with which questions of treatment are considered; formal prescriptions are rarely inserted but useless general statements are avoided. The Gordian knot of the classification of minor troubles has been skilfully divided by considering certain symptoms —e.g., constipation and diarrhœa—under separate headings. Patients complain of symptoms, not of diseases, hence the work of the beginner is facilitated by this departure from routine. The Diseases of the Circulatory System do not fall so readily into any system of classification and it is accordingly more difficult for the writer of this section to adhere to the general plan of arrangement. Some branches are dealt with in great detail—e.g., adherent pericardium—while others convey so little information that we are almost tempted to grudge them the space which they occupy. There is, however, much that is commendable in the way in which the main facts are presented and the same may be said of the section on Diseases of the Blood and Blood-forming Organs. The Diseases of the Thyroid and the Thymus are rather briefly considered by the editor and then comes the section on Diseases of the Respiratory System, which, in the hands of Dr. Kidd, forms a most complete and satisfactory section of the book. It is needless to say that the writer of this section shows a perfect mastery of detail and that the reader feels he is being personally conducted by a safe guide; apart from these considerations the style is full of charm, since Dr. Kidd knows how to express a great deal by the judicious use of a single vigorous word. Objection may be taken to some of his conclusions, especially with regard to treatment, but he is obviously sincere in his beliefs and future investigation may prove the truth of his views although at present they are contrary to general ideas.

The section on Diseases of the Kidneys seems to have been hastily written or imperfectly edited, for it is otherwise difficult to account for sundry blemishes—e.g., "In one case which could not bear quinine I substituted arsenic. As to its effect I cannot speak" (p. 439). To show the variability of symptoms in some diseases abstracts of symptoms are given occasionally, as under the headings of renal tuberculosis and of perinephritis, but from this mode of exposition it is to be feared that students will derive the impression that these are conditions which "no fellow can understand." Diseases of the Skin are dealt with by Dr. Whitfield who contributes a concise statement with many valuable hints upon treatment. It is regrettable that the plan of the volume did not permit the introduction of illustrations in this section, since word pictures, however careful, would gain much from their assistance when demonstration from patients is impossible.

The value of the inclusion of anatomical and physiological details is greatest in the section relating to the Nervous System and here the text is elucidated by numerous admirable illustrations. The classification of the Diseases of the Nervous System is not an easy task and the author of this section has not received much assistance from the printer in the selection of type while the division of paragraphs is faulty. The arrangement of the diseases of the cerebral membranes may be cited as an example of the lack of a few slight links and divisions which are requisite to render adequately the author's meaning—e.g., on p. 583 it is by no means clear whether the paragraph on diagnosis relates to miscellaneous forms of meningitis or to the posterior basic, the tuberculous, and the pyogenic varieties. With a little trouble the intention is clear but a students' text-book should not involve such difficulties. This section comprises an enormous amount of detail and bears evidence of careful study of recent literature. In a new edition it would require very little rearrangement to render it thoroughly satisfactory.

Metabolism, whether the term is used by Dr. Brodie or by Dr. Bain or by Dr. Dixon Mann, inevitably recalls "Mesopotamia" and the "great support to be derived from that blessed word"; we feel that we are breathing rarefied air in the midst of prosaic surroundings relating to gout, diabetes, obesity, and kindred topics; the explanations of these conditions scarcely rest upon solid foundations at the present time in spite of the attractiveness of the "biogen molecule" and the "oxidation of the used up side-chain." The general note on the pathology of infective diseases comprises the most recent observations and theories relating to immunity. Thus in a footnote we find a clear statement of Wright's view of opsonins as distinct from alexins, their action on bacteria which thus become subject to phagocytosis, and the theory of that production of specific opsonin in the course of active immunisation. It is needless to attempt to criticise minutely the account of infective diseases of temperate climes, since every page bears evidence of thorough mastery of detail and due regard to the most recent researches. Some 30 pages are devoted to tropical diseases and although they indicate the enormous advances that have been made of late in our knowledge of this special subject they serve also to show the numerous gaps which yet remain and to emphasise the need of further research.

From the foregoing account of the scope and the objects of this new text-book of medicine it will be gathered that the volume represents a distinct advance in a new direction—viz., the inclusion of what may be termed medical anatomy and physiology and that this innovation appears to be of great service; that the different sections have been contributed by different writers; and that in most instances the material has been adequately presented. It is inevitable that the personal equation should be apparent in a work of this description, although conciseness and precision have clearly been considered by all. As a trustworthy guide to modern medicine the volume challenges comparison with the most popular text-books and in a new edition needs but little remodelling. While we are grateful for the avoidance of the heavy calendered paper of many modern books we regret that the paper is so thin that it allows the ink to show through and thus produces a grey page which is rather confusing to the reader. With few exceptions the illustrations are included in the anatomical sections and therein serve their purpose admirably.

Bacteriology and Surgical Technic for Nurses. By EMILY M. A. STONEY, Superintendent of the Training School for Nurses, St. Anthony's Hospital, Rock Island, Illinois, &c. Second edition, thoroughly revised and enlarged, by FREDERIC RICHARDSON GRIFFITH, M.D. Penn. Illustrated. London, Philadelphia, and New York: W. B. Saunders and Co. 1905. Pp. 278. Price 6s. 6d. net.

FROM the official position of the author as well as from internal evidence it would appear that the course of instruction contained in this book is intended for nurses undergoing a hospital training with a view to become qualified to occupy the more responsible posts of the nursing profession. Much of the information would, however, seem more suitable for the dresser or the house surgeon than for the nurse. Many details of minor operations with descriptions of symptoms and methods of treatment are given, while much that in England is regarded as of importance to the nurse is omitted. Possibly this may be due in part to a difference in the American and the English ideas of the functions of the nurse or to differences in the conditions

under which American nurses work. Thus it is obviously contemplated as a not remote possibility that the nurse may have to administer the anæsthetic, and it is thought well to devote a chapter (Chapter IX.) to the subject of anæsthesia written not from the point of view of the nurse but from that of the anæsthetist. In part also it may be that, as stated in the preface, these are the "notes" of lectures and that we miss the demonstrations which would render such a chapter as that on bandaging and dressing comprehensible and useful. Finally, we notice that assistance is acknowledged from several surgeons in rewriting some of the chapters on operative procedures and this may account for the surgical as opposed to the nursing tone of the information.

Part I. of the book contains a short account of bacteriology. It appears to be the experience of surgeons who lecture to hospital nurses that some knowledge of the commoner pathogenic organisms is useful and has good results in the increased care taken to secure perfect surgical cleanliness. This portion of the book will probably suffice for this purpose, though expressions are used which, rightly or wrongly, give the impression that the teacher's knowledge is superficial. Some of the best chapters are those concerned with the preparations for, and the nurse's conduct during, various operations and throughout there is a very sound appreciation of the modern methods of sterilisation. There is a useful chapter on operations in private practice, with some good advice as to the conduct of nurses in regard to surgeons of whose methods they disapprove.

The present edition has been "thoroughly revised," though the reviser in his preface seems to regard his office as to some extent a sinecure. We should have expected, however, that the admirable work of the American commission on the connexion between yellow fever and the mosquito would have been mentioned. The statement that superheated steam is that which has been passed through "iron pipes which have been raised by flame to a temperature of *about 100° C.*" should have been revised and some explanation of the method by which (p. 148) a ligature is boiled in alcohol at 100° C. (without pressure) might have been furnished.

The book is illustrated with a large number of figures of instruments and apparatus. There are also several reproductions of photographs of various recently built operating theatres and a number of representations of the positions of patients in gynæcological operations and examinations. The book is well printed and well got up.

A Text-book of Pathology for Practitioners and Students. By JOSEPH MCFARLAND, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia; Pathologist to the Philadelphia Hospital and to the Medico-Chirurgical Hospital, Philadelphia. With 350 illustrations. London, Philadelphia, and New York: W. B. Saunders and Co. 1904. Pp. 818. Price 21*s.*

THE author of this work having taught pathology and bacteriology for 13 years endeavours in this volume to present in a succinct, intelligible, and readable manner the facts that every student should know before he advances from the elementary to the practical branches of medicine. The text-book has been written particularly for students preparing for their examinations who need to acquire the principles of pathology rather than to busy themselves with the evolution of the subject or to enter into the consideration of controversial points. Dr. McFarland has carried out his intention in an eminently satisfactory manner and students will find this manual a suitable one to read. Well-known facts are presented as such while others are frequently dismissed after brief mention with the frank statement that the matter under discussion is not yet fully understood.

In reviewing a work of this size it is impossible to consider the contents of every chapter; we shall therefore only call the attention of our readers to certain matters which we regard as more particularly worthy of mention. The chapter on the Etiology of Disease is well arranged and contains much interesting information. The remarks on "Intrinsic Factors of Disease" should also be noted. The subjects of climate and environment are fully discussed and the effects of certain occupations in causing disease are duly recognised. The student will do well to study the chapters on retrogressive and progressive tissue changes respectively. The various metamorphoses and the processes of atrophy and necrosis are well described and a full comprehension of these processes is, of course, essential for the proper understanding of pathological changes. The description of the neoplasms is rather brief but sufficient is said to give a student a good idea of the many forms of benign or malignant growths that may be met with. Dr. McFarland remarks that no classification of "tumours" has yet been devised that has been sufficiently satisfactory to meet with universal approval. Two forms of classification are geneally adopted, the one being based on embryology and the other on histology. Dr. McFarland has followed the plan devised by Professor J. G. Adami which is founded on embryological grounds. For the purposes of this work this classification is a good one. The observations on the etiology of tumours will be found interesting Dr. McFarland commences by remarking that "the existing cause of tumours is unknown." He briefly describes, however, some of the theories which have been evolved from time to time; amongst these are the mechanical theory of Virchow, the theory of embryonal "rests" and "vestiges" of Cohnheim, the "nervous theory" and the "parasitic theory." With regard to the last named Dr. McFarland remarks: "Though the parasitic theory of tumours is very attractive and while many of the apparent difficulties in the way of its acceptance may ultimately be explained away by the demonstration that the parasite is one which lives but part of its existence in man and another part in some lower animal, its demonstration at the present time is far from complete." The most modern investigations as to the cause of cancer scarcely support this suggestion, indeed, the "parasitic theory" is thought by some observers to be quite untenable.

The portion of this volume which deals with Special Pathology is also fully up to the modern requirements of medical study. The chapter on the Pathology of the Blood describes in lucid terms the changes in the relation of the constituents of the blood which are observed in certain morbid conditions. The various alterations which may take place in the number, size, and form of the erythrocytes are accurately described. A clear description is also given of the varieties of leucocytes and their significance in diagnosis and prognosis. In the pages devoted to the study of the pathology of the various systems of the body the student will find a vast amount of information couched in plain and concise language.

In conclusion, we may draw attention to the admirable illustrations with which the work abounds. We do not remember to have seen a text-book on pathology so well and so profusely illustrated. The representations of the microscopical sections are beautifully reproduced, the details being unusually distinct. We can recommend this text-book for the use of students.

The Other Side of the Lantern: an Account of a Common-place Tour Round the World. By Sir FREDERICK TREVES, Bart., G.C.V.O., C.B., LL.D., Sergeant Surgeon to H.M. the King. With 40 illustrations from photographs by the Author. London: Cassell and Co., Limited. 1905. Pp. 424. Price 12*s.* 6*d.* net.

THIS work, which is termed by its author but "a trivial book," contains in its pages many happy descriptions of men

and places. The author starts his diary at Tilbury Dock and in the first chapter we have an earnest that his eyes are open to impressions of all sorts and that his pen is ready to record them. The episode of the fond mother who has come to see her son off to India, weeping in seclusion behind a pile of rusty boiler plates on the quay while the son is drinking in the saloon, is exactly the kind of thing that might be expected to appeal to a hospital surgeon whose experiences both of that sort of mother and that sort of son are necessarily intimate. Gibraltar, Port Said (where the process of coaling is vividly brought before us), the Suez Canal, the Red Sea, Aden,—all receive description, and at length Bombay is reached. Sir Frederick Treves's first impression here is of the teeming life in India, the unwonted number of living beings, men and lower animals, who crowd the land. Next the fact is noted that India is a country of intense colour, as shown by its azure sky, the grey roads, the green cultivated fields, the many tinted costumes of the people, and the white domes and minarets of the mosques. This polychromatic scene is familiar to all of us, whether we have been in India or not, from the numerous illustrations of the country, but Sir Frederick Treves gives a dramatic point to the gay colouring that is prevalent by observing the apparent melancholy of the land and its people. The country is monotonous and often dreary as the traveller passes through its vast extent; the people talk little and laugh less as they tramp along in the dust; their religion is gloomy and their quiet fatalism might easily be mistaken for gloom. Then comes a chapter on the "Bazaars" of India, of which no more life-like picture has been drawn with the pen, so much so that on reading it the traveller is once again transported to those malodorous but fascinating quarters. We next come to the description of Agra, prefaced by a short account of the Moghul kings. The far-famed fort, the glorious beauties of the Taj, the tomb of Itmad-ud-Daulah, the marvellous city of Futtehpoor-Sikri, the mausoleum at Sikandra, the big mosque and the beautiful white palace of Delhi, Jeypore, Amber, Udaipur ("the most beautiful place in India"), and the dead city of Chitor all receive attention and ample justice from the author, who is clearly an enthusiastic sight-seer. Naturally, these scenes conjure up memories of the Mutiny, and the terror of that most awful passage in our national history finds full expression, both when discussing Delhi and when describing Cawnpore and Lucknow with their heartrending reminders of the terrible siege and the splendid relief. And so to Simla, now trembling in the agonies of an earthquake. Sir Frederick Treves visited this hill station in December, when the surrounding peaks are magnificent as viewed in their winter garments of snow, and renders cordial tribute to the lovely scene. Benares follows, and then, after a brief description of Calcutta, Burmah, the Golden Pagoda, the city of Mandalay, and the Irrawaddy are brought vividly before us. China was next visited and the result is a most realistic description of the city of Canton.

We have confined our running commentary mainly to Sir Frederick Treves's tour through India, but in Japan and the United States, on his homeward journey, he displays the same capacity for seeing things accurately and recording them sympathetically. "Trivial," to use the author's modest epithet, the book may be in the strict sense of the word, for the route gone over has been much traversed and the observations made follow aptly upon that route. But though Sir Frederick Treves has explored no hidden lands, has endured no arduous adventures, and has formulated no historical or ethnological hypotheses, though his tour was, as he styles it, commonplace, he has not written a "trivial" book according to the accepted and contemptuous usage of the word. On the contrary, he has given us an exceedingly well written and interesting volume.

Die Cystoskopie des Gynaekologen. (*The Cystoscopy of the Gynæcologist.*) By Dr. WALTER STOECKEL. With nine coloured plates and many coloured illustrations in the text. Leipsic: Breitkopf und Haertel. 1904. Demy 8vo, pp. 333. Price 8 marks.

THE importance of the diseases of the bladder to the gynæcologist can hardly be overestimated. The close anatomical relations of this organ to the rest of the pelvic organs, its frequent association with the affections of the uterus, and its liability to become involved in malignant growths originating in the genital tract render a knowledge of the various diseases affecting it most essential to all those concerned in the treatment of the diseases of women. A great deal has been done of recent years with the help of various forms of cystoscopes to enlarge our knowledge of the disorders of the bladder, and the ease with which it can be examined is in favour of the more extended use of the cystoscope.

This book by Dr. Stoeckel contains a very complete account of the subject of cystoscopy. The first part is devoted to a description of the instruments used and of the methods of their employment. A great deal of space is taken up with the details of the different kinds of cystoscopes and the various ways in which they can be employed, for example, catheterisation of the ureters, irrigation of the bladder, and the process of photography of the interior of the bladder. The author employs by preference the instrument devised by Nitze. The second half of the book deals with the different diseases of the bladder and its relationship to the various affections of the pelvic organs. Chapters are devoted to the condition of the organ in various pathological states of the kidneys and the ureters, in vesico-vaginal fistulæ and other injuries, in the diseases affecting the viscera in the neighbourhood, and, lastly, after the performance of different gynæcological operations.

The book should prove of great benefit to those operators who like to work with the instrument recommended by the author, but for our own part we think that possibly equally good results can be obtained by the use of the much simpler and more easily manipulated instrument of Kelly. The coloured plates are most interesting and are beautifully reproduced and the whole work bears evidence of the author's complete knowledge of his subject and is one which we can heartily recommend to gynæcologists and surgeons.

LIBRARY TABLE.

A Laboratory Guide in Elementary Bacteriology. By WILLIAM DODGE FROST, Ph.D., Assistant Professor of Bacteriology, University of Wisconsin. Third revised edition. London: Macmillan and Co., Limited. 1903. Pp. 395. Price 7*s.* net.—The second edition of this book was reviewed at some length in THE LANCET in 1902 so that detailed criticism of this new issue seems hardly necessary. The general plan of the book remains unaltered but minor changes have been made, such as the introduction of newer methods in place of the old and the rewriting of the directions for some of the experiments. The book furnishes instructions for a very complete course of practical bacteriology suitable for medical students and practitioners arranged in very logical sequence. It retains the distinctive characters of the former edition—namely, the arrangement of the work into short exercises so as to permit of easy adaptation to the requirements of various laboratories and the provision of blank forms for the study of micro-organisms which the student is supposed to fill up with the results of his own observations. This is a method which, if properly carried out, is of much educational value. Certain details criticised in the second edition have been altered but the dried-drop method for collecting blood for Widal's reaction is still the only one mentioned. The directions given in the section on Bacteriological Diagnosis

are clear and good but whether they are sufficient unless supplemented by the instructions of a demonstrator is doubtful. Taken as a whole, however, the book fulfils its object very satisfactorily.

Higiene de los Trabajadores y Enfermadades de los Obreros. (The Hygiene of Workers and the Diseases of Workmen.) By Dr. AMBROSIO RODRIGUEZ. Gijón: La Industria. Pp. 447. Price 8 pesetas (about 5*s.*).—This book, according to its subtitle, is intended for the use of medical students, foremen, workmen, and others employed in industrial establishments as well as of sanitary officials. It is a popularly written account of the elements of public health and of the accidents which may occur in various industries such as machine shops, mines, electric works, and potteries, together with an account of the various diseases to which the different occupations may give rise. For instance, concerning laundrywomen, Dr. Rodriguez points out that they are liable to rheumatism, callosities produced by the use of the "dolly," catarrhal affections, amenorrhœa, œdema of the leg, varix, albuminuria, ulcers, prolapsus uteri, chilblains, and hang-nails or other ulcerations of the skin caused by the caustic soapy water. They may also contract infectious diseases, notably syphilis, from the dirty linen. The various occupations are dealt with in this fashion very thoroughly. Other chapters of the book are concerned with first aid, with sick and accident societies, and with the various toxic effects—e.g., lead or mercury poisoning—to which workers are liable. The book is well illustrated and should, we think, be found useful to those for whom it has been written.

The Gardening Year-book and Garden Oracle, 1905. By the Editor of the *Gardeners' Magazine*. London: *Gardeners' Magazine* Office. Pp. 287. Price 1*s.* net.—This is the forty-seventh year of publication of this useful work of reference on all questions which belong to the art and craft of gardening. It is the kind of guide which amateur gardeners require for constant reference, as it contains pithy reminders of what should be done in the garden and the greenhouse during each month of the year. There are a number of useful articles on such subjects as potato culture, strawberry and tomato growing, lawns and lawn games, rock gardening, climbing and rambling roses, hardy flowers, manures and their uses, and fungoid and insect pests. The article on potato culture gives valuable hints on raising and propagating new varieties, planting, manuring, and storing the crop, with a selected list of the best sorts to grow. The book is full of valuable information of an up-to-date character. An almanac and diary occupy the early pages.

Wisdom of the East, the Teachings of Zoroaster, and the Philosophy of the Parsi Religion. By S. A. KAPADIA, M.D. Brux., Barrister-at-law. London: John Murray. 1905. Pp. 104. Price 2*s.* net.—Out of the millions of believers in Zoroastrianism in the bygone ages there now remains but a handful of devout followers, known as the Parsis, but the author hopes that the strangers to the faith may find in it food for philosophic enlightenment and the Zoroastrians themselves a subject for deeper and wider researches in the untold wealth of sublime theology and philosophy, now locked up in the monumental tomes of the ancient Avesta writings. In an introduction, which is followed by some quotations from the "Sacred Books of the East," Dr. Kapadia gives a survey of the philosophy of the Parsi religion from the time when Zoroaster, the prophet of Bactria, preached nearly 3500 years ago to the present day. The religion is based on the worship and adoration of the "All-knowing Lord" and it speaks to its disciples (1) of the life on earth; (2) of the life hereafter; and (3) of the immortality of the soul and the resurrection of the body. Zoroastrian philosophy shudders at the contemplation of the mother earth being defiled by the burial therein of dead bodies and consequently means are devised of disposing of corpses on high mountain tops by birds of prey or by the process of nature. According to the book of the "Original Creation," at the time of the resurrection the soul will demand its original body out of the custody of the three known elements—the earth, the water, and the fire. All the dead will rise with consciousness of their good and evil deeds. At the Great Assembly, in the presence of the righteous, all will penitently deplore their misdeeds. Then there will be a separation of the righteous from the wicked for three nights and three days. At the end of this time the factor of evil goes to meet his doom of total extinction and God in his mercy permits all to pass through a bath of purification and to arise in sanctified purity. The descriptions of the ceremonies held to perpetuate the memory of the dead and of many others which are given in this volume add to its interest.

New Inventions.

A NEW COUCH FOR X RAY WORK.

Mr. Edward W. H. Shenton, L.R.C.P. Lond., M.R.C.S. Eng., radiographer to Guy's Hospital and to St. Peter's Hospital for Stone, has invented, and is using at Guy's Hospital, an x ray couch specially designed to facilitate Roentgen ray work in hospitals and in private practice. The particular feature of the invention is the arrangement of the x ray tube which is fixed in a box and moves in longitudinal, lateral, and up-and-down directions under the table. These movements are controlled by turning two handles at the side of the table. The electric current is turned on and off by means of a footboard running along one side of the table, the ordinary incandescent lights of the room being turned on or off, as the case may be, simultaneously. To one side of the table is affixed a special holder for the screen, an ingenious arrangement allowing it to be adjusted to any height from the body of the patient convenient to the operator, while means are devised for turning the screen back to allow of a photographic plate being placed in position. The screen can afterwards be dropped into its original position if required. The top of the table can be converted into a carrying stretcher if necessary and the table itself, which is on castors, can be locked to the floor when required. The makers are the Sanitas Electrical Company, Soho-square, London, W. We have seen the table in use and the ease with which the operator worked would seem to show that it is a real economiser of the radiographer's labour, and what is equally important, it minimises the distress of the patient.

SOCIÉTÉ INTERNATIONALE DE LA TUBERCULOSE.—This society, the object of which is to study the most efficacious means of preventing and treating tuberculosis, held its annual general meeting in Paris on March 14th, under the presidency of M. Richelot, member of the French Academy of Medicine. After a discourse by Dr. Samuel Bernheim, in which he clearly set forth the actual state of the question, the society proceeded to elect its officers for the session 1905–06. The following gentlemen were appointed:—President: Professor Lancereaux, of the French Academy of Medicine, of Paris. Vice-Presidents: M. Huchard, M. Richelot, and M. S. Bernheim of Paris; Professor von Schrötter of Vienna; Sir Hermann Weber of London; and Professor de Lancaster of Lisbon. General secretaries: Dr. Georges Petit of Paris and Count Ivan Tolniewski of London. Treasurer: M. Papillon of Paris. Assistant treasurer: M. L. Garnier of Paris. Secretaries "de séance": M. Tartière, M. Bourdin, M. Roblot, and M. Chauveau of Paris. Archivist: M. Rualt of Paris. All applications for membership, &c., should be addressed to Dr. Georges Petit, 51, Rue du Rocher, Paris.

THE LANCET.

LONDON: SATURDAY, APRIL 15, 1905.

Proposed Confederation of the London Medical Societies.

ALL problems of evolution afford an interesting subject of study. Growth usually implies progress but may be attended by certain difficulties which have to be faced and which have to be overcome. With the progress of medicine there came a rapid growth of specialisation and it was natural that this should be accompanied by the formation of new societies for the comparison of experience and the discussion of improvements. These departures have followed natural laws along well-defined lines of cleavage and the general result has been satisfactory, since true progress can best be appreciated and abnormal tendencies checked by those who, by their training and experience, are in a position to separate the wheat from the chaff. This may be regarded as the justification for the formation of a large number of medical societies, and there is no necessity to take into account the local needs of the profession. Local societies should and will spring up wherever there are sufficient numbers for harmonious interchange of views on the difficulties of diagnosis or of treatment, or for the record of ethical matters. Frequently such meetings are of the nature of social gatherings which are of undoubted service in promoting good fellowship amongst those who are constantly meeting in their work. But such local societies, the number of which is large and might well be larger when the vast size of the district called London is considered, are outside the purview of the evolutionary development which is now to be considered.

Although division and subdivision must be regarded as inseparable from healthy growth, it is clear that there are inherent dangers in the process unless some link with a coördinating centre is retained. There is a natural and and very proper fear lest specialisation should lead to a lack of the sense of proportion or even to error through unduly focussing light upon a small portion of the field while the rest is left in darkness. Moreover, there is the question of finance which undoubtedly accompanies the evolution of new bodies and causes many to pass through periods of anxiety. Multiplication entails expense in the management, and the cost of belonging to numerous societies undoubtedly limits the aspirations of many of the younger generation. Concentration or federation would seem to supply a means of reducing this cost and thus of reducing the annual subscriptions while conferring desired privileges upon all. Although it would seem essential that the constitution of a coördinating centre should involve some principle of parental control due liberty of action might be given to all constituent sections. To facilitate the enjoyment of more numerous points of contact would tend to the advancement of medicine and to the diminution of any undesirable tendencies of specialism. The younger men would benefit from any scheme of concentration or federation which would give greater freedom of selection. In early days of practice, before the conditions of work have led to specialisation, many derive great advantage from roving from one society to another, and even later there are many occasions upon which all members of the profession are interested in the subject under discussion at one society. As it would seem reasonable to desire at that society the presence of all who might usefully contribute to debate the arguments for confederation of the London medical societies will be seen to have considerable force both scientifically and economically.

The meeting at the Royal College of Physicians of London on Monday last (see p. 1020 of our present issue) at which the proposed confederation of the London medical societies was considered, must have surprised even those who were the most sanguine supporters of the scheme. On a wet afternoon the attendance of about 200 members of the medical profession sufficiently indicated the general interest in the proposals, but in view of the history of previous efforts it could scarcely have been expected that unanimity would have prevailed. Sir WILLIAM S. CHURCH, President of the Royal College of Physicians of London, had been asked to convene a meeting and to preside at it, and he opened the proceedings with a brief historical sketch of previous efforts to fuse the principal societies. The failure of all of these might have caused much discouragement had not Sir WILLIAM CHURCH tactfully referred to the causes of failure in an early part of his address and suggested that federation did not involve fusion with the loss of identity. This line of argument was indeed foreshadowed in his letter, which we published on April 1st, 1905, p. 886, and in which he spoke of the attempts to "unite the various London societies representing medical science and practice more closely, so as to form a united Royal Society or Academy of Medicine, in which the existing societies would retain their individuality as sections of the united body." It is evident that, in his opinion, all previous efforts were wrecked on this question of fusion or absorption, and that the only chance of success was the formation of a new central body with a new name of a sufficiently wide character to permit federation without loss of dignity and without danger of invalidating title to property. While it was essential to obtain agreement on broad principles, it was impossible to enter into any detailed discussion of a scheme; in fact, the proceedings speedily proved the wisdom of narrowing the issue to a simple expression of opinion on the question of union. The use of the term the "principal societies" in the first proposition appeared likely to cause some discord. Sir WILLIAM CHURCH spoke of the "central societies" and explained that this term included all those meeting at 20, Hanover-square, or at 11, Chandos-street. This limitation excluded those societies which may be regarded as *local*, such as the Harveian and the Hunterian, though their claims for consideration cannot be ignored should they wish to join.

The meeting readily supported the first proposition, "That in the opinion of this meeting, convened by the President of the Royal College of Physicians and composed of Fellows and Members of the medical societies of London, it is highly desirable that an effort should be made to unite the principal societies into a new body, to be known as the Royal Society of Medicine." Some preference was expressed for a change of title, for the substitution of Academy for Society, and with a show of reason it was urged that constituent societies might more readily retain their name under the comprehensive term "Academy," but this was left as a detail for future consideration. A second proposition, which nominated a committee to make such inquiries as may be necessary and to submit a scheme of union to the various societies for their consideration, was adopted, and it was also agreed that a general meeting of the societies concerned should be convened in July next, if possible, to receive the report of the committee. Started with such enthusiastic unanimity it is to be hoped that no minor details may wreck the scheme. Its advantages are many and obvious, while the objections, which did not find voice at the meeting, are, it would seem, chiefly those of sentiment.

"Eugenics."

WE need make no apology to our readers for returning to the subject of the so-called science of "Eugenics," because if, as we understand Mr. FRANCIS GALTON to contend, it be indeed possible to elevate the general standard of the human race by judicious matrimonial selection, the enterprise is one not only eminently worthy of assistance from the members of a learned profession but also one in which it is practically certain that such assistance will be demanded from them by the public. Even now medical men are occasionally consulted as to the propriety or desirableness of some particular marriage; and we chance to have before us at this moment a letter written 50 years ago by an eminent physician now deceased which fairly expresses what we believe would still be a generally accepted point of view, although it would probably fail to satisfy Mr. GALTON'S requirements. In the case in question the writer, as physician to an insurance office, had advised an addition of from seven to ten years to the age of an applicant for insurance and he was written to, at the conjoint request of the applicant and of the father of a lady concerned, to ask "whether, on the ground of the applicant's health, he would object to his marriage with a lady in whose welfare he, the physician, was interested?" The reply was, "All other matters being favourable, I should not object to such a marriage. As the medical referee of an insurance office which is exceedingly particular as to the character of the lives which it accepts, I have thought it necessary to add from seven to ten years to Mr. A's age, with a view of thus covering certain risks which present themselves. These risks are not, to my mind, of a serious character, or the life would not be accepted by the office. They are merely matters of consideration in regard to the contingencies affecting masses of lives, but are scarcely sufficient to influence in any way the question of eligibility in a matrimonial point of view." The physician clearly entertained the opinion that he was not called upon to protect a lady against contingencies from which it was his duty to protect the insurance office; and this opinion would no doubt be based upon the extreme uncertainty as regards individuals of occurrences which are certain as regards a multitude. Here, indeed, is the crux of the difficulty. A million husbands, to each of whose ages a prudent insurance office would require an addition, would be practically certain to produce a generation somewhat inferior in health, strength, or efficiency to the offspring of a million selected lives. Whether one such husband would be certain, or even likely, equally to lower the standard of his single family is a question to which only a very few persons would venture to return a positive reply. It would, nevertheless, be the question on which a professor of eugenics would daily be asked to afford enlightenment and on which his decisions might exercise a very powerful effect upon the welfare and happiness of individuals or of families. Are there any data upon which such decisions could be securely founded? If there are we have yet to become acquainted with them; and, setting aside actual disease, we do not think it would be possible on the basis of any physical examination of a bride and bridegroom, or of any knowledge of their family histories, to arrive at even high probability with regard to the physical, moral, or intellectual endowments of their children.

We quoted Mr. FRANCIS GALTON on a former occasion as saying that the researches of the last 40 years had invalidated arguments which might formerly have been used against his contention, but no such researches have been brought to our knowledge. WEISMANN and others have suggested physical hypotheses by which the phenomena of atavism may possibly be explained, but these hypotheses cannot be said to have been established and the phenomena, alike in their occurrence and in their uncertainty, have been familiar to the human race from the most remote antiquity. MALEBRANCHE knew nothing about chromosomes but he wrote in 1674: "C'est qu'il y a toutes les apparences possible que les hommes gardent encore aujourd'hui dans leur cerveau des traces et des impressions de leurs premiers parens." VOLTAIRE, contrasting the comparative certainty of the results of sexual unions in the lower animals with the uncertainty of the same results as observed in man, wrote: "C'est chez l'homme seul que le physique est dirigé et corrompu par le moral," and herein possibly—that is to say, in the influence of emotions and intellectual states—should be sough the explanation of many of the most perplexing incidents of heredity. Nothing has been established which throws any light upon the ordinary causes of the occasional predominance of one or of the other parent in determining the characters of the offspring, or upon the ordinary causes of unlikeness to either, which may often be due to an atavism not always admitting of being traced. Most medical men will agree, we think, that even when the wife has not been the predominant partner in earlie conceptions she is likely to become so if the nervous energies of the husband are engrossed by business anxietie or are weakened by illness at the periods of subsequent

ones; and there have been well-authenticated cases in which such anxieties have witnessed the cropping up of previously unsuspected constitutional conditions. Soon after a great commercial failure, which led to widely diffused disaster, it was said that children subsequently born in some of the ruined families displayed marks of syphilitic inheritance from which their elder brothers and sisters had been free and that inquiry showed their fathers to have suffered from the primary disease before marriage and to have had medical authority for supposing themselves to have been cured. Not only business anxieties but the cares of State have often seemed to be unfavourable to the begetting of children inheriting the paternal qualities, and history is full of examples of great men whose sons have fallen lamentably below the paternal standard both in physique and in capacity.

It is certain, and, indeed, obvious beyond the reach of contradiction, that the tendency of the human race, when placed in favourable circumstances, is towards gradually progressive improvement alike in intellect and in physique but the course of this improvement is marked by eddies and backwaters of the most perplexing kind and is manifestly often modified by circumstances of which we have but limited knowledge and as to which we may easily be misled by ingenious guesses. Neither physiology nor genealogy in the least degree explains to us the genesis of the great man who springs up in the most unexpected places where no kind of ancestral preparation for his coming can be perceived. "Where there is nothing great to be done," said DUMOURIEZ, "there can be no great men," and it may be that mute inglorious MILTONS surround us on every side and that genius remains undeveloped in the absence of opportunity. It is at least certain that we cannot so arrange marriages as to secure offspring of commanding physical or intellectual power but it may be that we can so arrange them as to avoid the worst examples of decadence. It is obvious that we might raise the moral and the physical condition of the masses by education and by legislation and that the masses, if so raised, would in time supply the country with children prepared for still further advances in the same directions. The law, which has assumed the right of the nation to take possession of children for the purpose of sending them to school, should, in the opinion of many, clearly assume, as a corollary of that right, the kindred one of seeing that they are fed, and clothed, and washed, and withdrawn from circumstances likely to be destructive of their physical or moral welfare. If this could be done we should not require to select partners for the young men and maidens of the next generation but might permit them, as at present, to select for themselves, with the advantage of having better specimens to choose from. The middle classes might even go the length of looking coldly upon a combination of the small young woman with the small young man, but even then they should not be permitted to forget that brains are not always present in exact proportion to stature. We may, in short, treat the genesis of the coming race on such principles as to justify a hope in the gradual improvement of mediocrity, in whatever station of life it may be found, and the gradual improvement of mediocrity will be likely at once to push up those who are above and to drag up those who are below. The influence must, we think, be exerted rather upon the community than upon individuals with whom, in the present state of knowledge, it might often be hazardous to interfere. The marriage service of our church reminds us that the tie was instituted, not merely for the procreation of children, but also for the mutual help and comfort that the one ought to have of the other; and with this aspect of it we fear it would be dangerous for even a professor of eugenics to interfere. If we may reverse an old proverb, those who will have to lie upon a bed may at least claim to be given a free hand in making it.

Epidemic Cerebro-Spinal Meningitis.

OF all the epidemic diseases attacking mankind epidemic cerebro-spinal meningitis, or cerebro-spinal fever as it is sometimes called, offers at the present time some of the most interesting problems for discussion. Although it is one of the most fatal of all acute diseases, as many as 77 per cent. of the cases proving fatal in some epidemics, yet owing to the peculiar local distribution of the epidemics it does not as a rule figure largely in the death returns. On the other hand, sporadic cases are by no means uncommon and it will probably be found when the bacteriology of cases of meningitis is more systematically investigated that the number of cases of this disease is much larger than is commonly supposed. At the present time the question of its epidemic spread is occupying the attention of both the lay and the medical press owing to the comparatively large number of cases occurring in certain parts of America and Germany. In New York during the month of February 149 deaths occurred from this disease and so serious is the view taken by the city board of the epidemic that an important commission has been appointed to investigate the disease and to endeavour to devise means to prevent its spread, as mentioned in our New York correspondent's letter in THE LANCET of April 8th. Again, in the neighbourhood of Kattowitz in Silesia over 450 cases have recently occurred with a mortality of 37 per cent. and considerable alarm exists at the prevalence of the disease. The term meningitis was introduced by an army surgeon named HERPIN in 1803 but the first recognition of meningitis as a specific fever was due to VIEUSSEUX of Geneva, who studied an epidemic which occurred there in the winter and spring of 1804–05. The first epidemic recorded in America was that occurring at Medfield, Massachusetts, in 1806 and described by DANIELSON and MANN. No doubt the disease had been prevalent before this time but it was probably confused with typhus fever and other eruptive febrile diseases, a confusion which has persisted until comparatively recent times (the late Dr. MURCHISON regarding the disease as a variety of typhus fever) and which is likely to be perpetuated by the name of "spotted fever" often popularly applied to the disease owing to the frequent occurrence in certain epidemics of herpetic, erythematous, and petechial rashes which, however, are not by any means constant or characteristic. Since 1806 epidemics have occurred in many different parts of the world, notably in America, in Ireland, and in Germany. A few minor outbreaks have been recorded in this country

but the number of persons affected has, in nearly all cases, been very small.

As long ago as 1887 WEICHSELBAUM isolated an organism from certain cases occurring in Vienna to which he applied the name of diplococcus intracellularis owing to the fact that it is frequently found in the polymorphonuclear leucocytes. His observations attracted very little attention, especially in France and in this country, where the disease was regarded as due to the pneumococcus, or a modified form of that organism, a view which was apparently confirmed by the close relations existing between it and pneumonia which both present the same seasonal incidence, are associated with herpes, and with a similar leucocytosis and a fibrino-purulent exudate. Moreover, both diseases may occur in epidemics at the same time. In 1895 JAEGER, however, fully confirmed WEICHSELBAUM'S observations and the general result ot modern bacteriological investigation of these cases has been to substantiate the claim that WEICHSELBAUM'S diplococcus intracellularis, or the meningococcus as it is sometimes called, is the causative agent of the disease. Two other points of great interest are that in the sporadic cases of cerebro-spinal meningitis occurring in London and other towns an organism presenting practically identical characters is obtained, while in the cases of posterior basic meningitis or "cervical opisthotonos" occurring in infants an organism has been isolated by Dr. G. F. STILL which has very closely similar characters. Our knowledge of the conditions leading to the epidemic spread of cerebro-spinal fever is of the scantiest. Epidemics most commonly occur during the winter and the spring and, it is said, especially after severe winters. Institutions such as barracks, asylums, prisons, and workhouses are peculiarly liable to be attacked and the disease is therefore apparently favoured by overcrowding. Its age incidence is peculiar, children and young adults being particularly liable, while above the age of 35 years it is very rare. In an epidemic occurring at Dantzic in 1865 93 per cent. of the fatal cases were under the age of 15 years. It is usually supposed that the disease is not directly infectious, or only very slightly so, but this is a matter which is not at present definitely settled and is one with regard to which the commission now appointed in New York may possibly afford us valuable information. Owing to the fact that the organism can frequently be obtained from the nasal discharges of patients suffering from the disease it has been assumed that the nose is the chief channel of infection; in fact, JAEGER thought that infection always occurred in this manner.

The morbid changes produced by the organism are those of a cerebro-spinal leptomeningitis with suppurative or fibrino-purulent exudate and increase in the amount of cerebro-spinal fluid with distension of the ventricles. The great liability to severe complications and sequelæ is also one of the serious features of the disease. Chronic hydrocephalus, blindness, deafness, arthritis, and periarthritis may be referred to as among the most frequent of these. The treatment has hitherto been mainly symptomatic, morphine or opium being the drug which has most generally been employed. Of late years the withdrawal of fluid by lumbar puncture has been tried as a palliative and curative measure. The suggestion to drain the fluid from the spinal theca was first made by Dr. W. ESSEX WYNTER[1] and this method was employed by him in a case of tuberculous meningitis in 1891. In the same year QUINCKE described the process of lumbar puncture as at present carried out, which is now extensively practised as a diagnostic measure, the cytological and bacteriological examination of the fluid removed affording very useful data. Repeated puncture has frequently been tried in cases of epidemic cerebro-spinal meningitis and different opinions have been expressed with regard to its utility. Professor W. OSLER in his Cavendish lecture delivered in 1899 described a case in which 17 punctures were made between the twenty-ninth and seventy-fifth days of the disease, but in spite of this the case eventually ended fatally. Dr. HERMANN LENHARTZ of Hamburg, who has observed 45 cases of the disease in the course of the past ten years, is convinced of the value of early and repeated lumbar puncture in the treatment of these cases. He records his results in an interesting paper in the *Münchener Medicinische Wochenschrift* of March 21st, 1905. The method which he adopted was to insert the tube between two spinous processes, the patient lying on the side with the thighs strongly flexed on the pelvis. The most favourable situation for puncture is usually the spot where a perpendicular line from the crest of the ilium cuts the line of the spine. As a rule about 30 cubic centimetres were withdrawn and in no case more than 50. It is advisable to measure the pressure of the fluid in millimetres in the spinal canal. This varied from 620 to 150 in one of his cases of which details are given. After withdrawal of the fluid it may be as low as 40 millimetres. Dr. LENHARTZ'S good results may possibly be attributed to the fact that he adopted lumbar puncture early in the course of the disease and repeated the process almost daily if signs of increased intracerebral pressure developed. Thus in one of his cases lumbar puncture was performed 15 times and a total quantity of fluid amounting to 400 cubic centimetres was removed. His observations are distinctly encouraging although he does not give statistics of the recoveries. In no case, however, were any unfavourable symptoms observed as a result of the puncture. The method is certainly a rational one, as it aims at keeping the pressure low in the cerebro-spinal canal by removing the excess of fluid and preventing it from accumulating. Dr. LENHARTZ'S paper is opportune in the time of its publication and we may hope that one result of the present epidemic may be an advance in the methods of treatment of this grave disease.

Annotations.

"Ne quid nimis."

THE BUDGET.

THE Chancellor of the Exchequer was received with cheering when he rose to make his Budget statement last Monday, for it was believed that he would be able to report establishment of equilibrium between expenditure and revenue. The estimated revenue of the country for the year 1905–06 turned out to be by nearly three millions superior to the estimated expenditure, though in one direction a heavy decline was

[1] THE LANCET, May 2nd, 1891, p. 981.

shown. The revenue for 1904–05 from wine, spirits, and beer altogether failed to fulfil anticipations, for the amount realised was £1,516,000 below what had been expected. Mr. Austen Chamberlain considered that the figures showed us to be witnessing a change in the national character and that for the future Chancellors of the Exchequer must look less to Excise revenue than has been their habit in the past. This may be awkward for Chancellors of the Exchequer but it is excellent hearing for the public and for the medical profession, who for years have been preaching that improvements in the drinking habits of the country would mean a great gain in national morale and physique. We are only a little surprised that the spread of the doctrines of moderation in regard to alcohol, which has been so noticeable recently, has not sooner produced its mark upon the revenue. It is possible that the decrease in the wine duties may have been influenced to some extent by fraudulent competition, and our readers have good reason for knowing that this does occur; but the figures, as a whole, bear out Mr. Austen Chamberlain's interpretation that as a people we are showing a laudable tendency to spend less money upon alcoholic drink. "Twopence off tea" was his reward to a temperate nation for its eschewal of stronger liquor, the rest of the surplus going to the sinking fund and to reserve for contingencies. To medical men whose professional incomes often attain to the figure where the income-tax is most oppressive the fact that no abatement was granted on this toll must have come as a disappointment, but Mr. Austen Chamberlain's action in devoting a part of the surplus to the strengthening of national credit has been widely accepted as sound finance.

MANNERS IN THE LONDON STREETS.

THE traffic of London has its daily complement of victims and the wonder is only why that complement is so modest. The element of thoughtlessness on the part of the foot passenger is responsible for most of the big catastrophes, wide-awakeness and freedom from pre-occupation being the two necessary factors for safe pedestrianism. The man who is absorbed in his ideas and fails to notice what is going on is the *bête noire* of the streets, obstructive to others and dangerous to himself. It is not so much the danger of the road traffic to which we desire to call attention as the carelessness of the public in perambulating the foot-paths. Many of them, in London at any rate, have no idea of avoiding collision with those whom they meet and no objection to blocking the way of those whom they precede. They throw the lighted ends of their cigarettes anywhere and may still spit despite the public agitation against the filthy habit. Sticks and umbrellas improperly carried cause many accidents. The proper way to carry these accessories is to hold them by the handle with the point down. The excited individual who raises his stick or umbrella in gesticulation runs a great chance of damaging someone. "A short time ago," writes a correspondent, who has addressed us feelingly on this subject, "I saw a gentleman severely injured in the eye by an over-eager passenger in an omnibus who raised his umbrella suddenly whilst gesticulating to the conductor and it is no uncommon thing to see ladies temporarily annexed by the handle of a passing umbrella tucked under the arm. It is the custom to advertise lessons in 'deportment' as one of the elements of the scholastic curriculum but the management of the stick and the umbrella appears to be neglected in this educational course and what might be made an ornamental addendum to the sartorial output becomes a dangerous nuisance, as witnessed in the swaggering switch in the hands of the new recruit or the careless twirl of the dandy's cane." We do not think "the twirl of the dandy's cane" is an expression founded upon observation, for the man of to-day does not happen to flourish his stick, but undoubtedly persons who carry their sticks and umbrellas under their arms horizontally pointed, or who thrust them upwards in the desire to hail a vehicle, are a public nuisance. Education in deportment, however, should not be limited to teaching "the nice adjustment of a clouded cane," and all parents should instruct their children to be thoughtful in the streets, thoughtful of what is going o around them and als of the comforts of the public.

THE VISIT OF FRENCH PHYSICIANS AND SURGEONS TO LONDON IN 1904.

THE visit of the French medical men to London in October, 1904, is the subject of a most interesting article by Dr. Just Lucas-Championnière in the November number of the *Journal de Médecine et de Chirurgie Pratiques*, of which he is the editor. At the outset he remarks humorously that he was not without misgivings when it was found that the party numbered 150 members, but he acknowledges with satisfaction that the preliminary arrangements made by Dr. Sillonville and Dr. Triboulet were excellent and that the energy of the English executive committee enabled the visitors to see all that was possible of the London hospitals during the three days which were at their disposal. It was only to be expected that in hospitals, as in other institutions, and even in private houses, there should be some difference between French and English methods. Dr. Lucas-Championnière being a surgeon was naturally attracted by surgical details, such as the situation of the operation theatre at the top of the building and the careful administration of anæsthetics. He was also struck by the spaciousness of the wards and the ample distance between the beds. He writes enthusiastically of all that he saw and heard, with only two regrets—namely, that there was no time to inquire into the details of the public health service and that the state of Lord Lister's health prevented him from being in London at the time. The entertainments and other festivities were, he says, too numerous for individual mention but he devotes some paragraphs to the reception at the Royal College of Surgeons of England, the luncheon given by this journal, and the banquet at the Hotel Cecil. The article as a whole is very gratifying to English readers and admirably shows how community of idea in members of the same profession may encourage international amity.

YOHIMBIN.

A NEW drug is described in a recent number of the *New York Medical News* (Vol. LXXXV., No. 2) by Dr. E. B. Coburn and Dr. J. H. Claiborne. It is named yohimbin and is an alkaloid derived from the yohimbehe tree, a native of West Africa. It crystallises in silky white needles, is readily soluble in ethyl-, methyl-, and amyl-alcohol, and in ether and chloroform, but is only soluble in water to the amount of about 2 per cent. The hydrochlorate is usually employed but readily decomposes. It is said to be an aphrodisiac. 25 cubic centimetres of a 1 per cent. solution may be subcutaneously injected without harm and a local anæsthesia is established which lasts for nearly two hours. It causes anæsthesia of the cornea and conjunctiva when dropped into the conjunctival sac. According to M. Magnani, who has recorded his observations in the *Annali di Oftalmologia* (Tome XXII.), though it produces smarting at first, it dulls the sensibility of the cornea in two minutes and destroys it completely after the lapse of ten minutes, the anæsthesia lasting half an hour. The effects on the pupil are uncertain and the drug has no effect upon the accommodation. Soon after the solution has been instilled the eye becomes hyperæmic, and hence M. Magnani suggests its employment in chronic affections of the eye which require

stimulation. He prefers it to tropacocaine because its effects are more persistent, and to cocaine because it does not affect the epithelium or interfere with the nutrition of the cornea or produce mydriasis and hypotony. Moreover, it is not toxic. Dr. Claiborne made experiments on himself with solutions of various strength and also with solutions of yohimbin and adrenalin.

THE HUMANITARIAN LEAGUE.

WE have received from the honorary secretary of the sports' department of the Humanitarian League a circular signed with a number of names of more or less eminent men which has been addressed to the "Headmaster-elect of Eton." The signatories are made to say: "Without entering on the general question of the morality of field sports as practised by adults, we would express our conviction that it cannot be otherwise than demoralising for the *young* to be encouraged to seek amusement in the infliction of pain on animals, and that the permission granted to Eton boys to indulge in the sport of hare hunting, when drag hunting is readily available as a substitute, is greatly to be deplored." We do not know who is responsible for the drafting of this circular but we must reprobate in the strongest manner the assumption that Eton boys or any other persons who hunt are seeking amusement in the infliction of pain on animals. We do not deny that it hurts a hare or a fox or any other animal which is hunted by hounds to be caught and to be killed but we do deny that those who follow the hounds find their amusement in the infliction of pain. The recreation of one of the most eminent of the signatories is given in "Who's Who" as "sea-fishing," and we are quite certain that if anybody charged him with taking recreation by the infliction of pain on fishes he would be rightly much annoyed. We cannot think that those who have signed this circular have really gathered the meaning of the preface to which they have attached their signatures.

INFLUENZA, PNEUMONIA, AND HEART DISEASE AT CHICAGO.

THE department of health of the city of Chicago issues every week a leaflet which is extensively distributed to the press and to anyone whom it may benefit. This is done on the principle that sanitation is to a very large extent a question of education and that the best of laws will prove ineffective unless the people at large appreciate their importance and strive to apply them. By constantly calling attention to the various health problems as they arise the public is led to take an intelligent interest in such matters and then it is not so difficult to obtain popular sanction for necessary measures. For instance, at present, while the general death-rate is very low, there is a somewhat puzzling increase of mortality in regard to some diseases. Thus, during the decade 1880–89 the average annual death-rate from pneumonia was equal to 1·269 per 1000 of the population. During the last decade the annual average was 1·847 per 1000. This increase of 45·5 per cent. followed upon the epidemic prevalence of influenza which began at Chicago in December, 1889. But this is not all. During the earlier decade—that is to say, before the advent of influenza—the average annual deaths from heart disease amounted to 0·680 per 1000 and this increased 45·7 per cent. during the last decade and equalled 0·991 per 1000. The similar augmentation of fatality caused by these two diseases has given rise to the belief that influenza is the fundamental factor. During the present winter influenza has been more prevalent than at any time since 1891. Therefore special warnings have been issued urging that influenza is infectious and that the isolation of the patient and the ample ventilation of places and vehicles of public resort are the best protective measures. All excess, especially the abuse of alcohol, predisposes to this disease. The secretions from the nose, the mouth, and the throat of the patients teem with the influenza bacillus, and the department of health offers to disinfect the rooms, the bedding, and the clothes of all who have this disease. It is also urged that bacterial examination is of the first importance and the department of health places its laboratory and its experts gratuitously at the service of the public. Already the bacteriological laboratory claims to have found the influenza germ where there is an apparent simple coryza or uncomplicated influenza; then its presence has been noticed in conjunction with various other diseases, such as bronchitis, conjunctivitis, pulmonary tuberculosis, diarrhœal disease, diphtheria, empyema, endocarditis, meningitis, nephritis, middle-ear disease, mumps, pneumonia, scarlet fever, tonsillitis, and whooping-cough. The bacteriological laboratory also claims that cases which were mistaken for cerebro-spinal fever, lumbago, rheumatic fever, and typhoid fever revealed the presence of the influenza germ and therefore it is urged that more general use should be made of the facilities given for bacteriological investigation. In this latter respect the city of Chicago, in common with many other American cities, is to be congratulated on the possession of a public service of this description.

PROPOSED ADDITIONS TO THE POISONS SCHEDULE.

AT the recent monthly meeting of the council of the Pharmaceutical Society[1] a motion providing for the addition of certain poisonous substances to the Poisons Schedule was carried unanimously. The motion reads as follows:

That by virtue and in exercise of the powers vested in the Council of the Pharmaceutical Society of Great Britain, the said Council do hereby resolve and declare that each of the following articles—namely, cocaine and its salts, picrotoxin, acetanilide, preparations of cocaine, digitalis and its preparations, mercuric iodide, mercuric sulphocyanide, soluble salts of oxalic acid, strophanthus and its preparations, sulphonal, ought to be deemed a poison within the meaning of the Pharmacy Act, 1868; and also that of the same, each of the following articles—namely, cocaine and its salts, picrotoxin, ought to be deemed a poison in the first part of the Schedule A to the said Pharmacy Act, 1868.

According to the *Pharmaceutical Journal* the above recommendations can have no legal effect until the formal sanction of the Privy Council has been given, but the approval of that body has already been informally conveyed to the President of the Pharmaceutical Society. The proposed alterations, among others, were recommended two years ago by the Departmental Committee on Poisons and the council of the Pharmaceutical Society has taken action in the matter owing to the improbability of the subject of poisons receiving attention in the near future from the present Government. In taking this step the council has performed a public service. The poisonous substances named include cocaine and its salts, acetanilide, and sulphonal, substances which have during recent years become alarmingly popular with the general public. There is no doubt that the sale of cocaine has been to a very large extent restricted owing to the caution and discretion exercised by the large majority of pharmacists, and yet the "cocaine habit" is of so insidious a nature that within a quarter of a century of its introduction into this country it has claimed thousands of victims and has become a scourge second only to opium. It is to be regretted that writers of fiction should give prominence to habits so pernicious as the "cocaine habit" unless to condemn them. Thus, the vivid pen-pictures of Sherlock Holmes gained for that subtle detective at once a high position among the heroes of fiction. His methods came to be copied by would-be bloodhounds of crime, so much so that no self-respecting student of the subject would now attempt to tackle a problem, however trivial, without first

[1] Pharmaceutical Journal, April 8th, 1905, p. 522.

wrapping himself in an oriental dressing gown and lapsing nto deep thought for several hours the while he smoked many ounces of tobacco. And is it not arguable that in certain cases he might be tempted to go further and to try the effects of cocaine in imitation of the redoubtable Holmes? Two other substances that have of late years become extremely popular with the public are sulphonal and acetanilide, in the form of tablets and powders, either alone or mixed with other ingredients. It is satisfactory to note their inclusion in the list. If the recommendation of the council of the Pharmaceutical Society receives the sanction of the Privy Council it will have the result of preventing the public from purchasing cocaine and its salts and picrotoxin except as ingredients of a medical prescription unless the purchaser is known to the pharmacist or is personally introduced, a record of the sale being made in a poisons register. In addition the package must be labeled "Poison" and must bear the name of the article and the name and address of the seller, which is the only restriction in the case of the other substances proposed as additions to Part II. of Schedule A.

RECOVERY UNDER TREATMENT FROM HYSTERICAL PARALYSIS LASTING 20 YEARS.

IN the *Boston Medical and Surgical Journal* of March 9th Dr. H. C. Baldwin has reported a remarkable case which shows what may be accomplished by treatment in apparently hopeless conditions. A woman, aged 39 years, was seen in September, 1903. When a child she used to walk in her sleep, especially when she had been excited. She had good health up to the age of 19 years, when she suffered from pain in the back. One day her sister unexpectedly put her hand on the patient's back and the latter collapsed. She was put to bed to rest for a week but she was not able to get up for three years. After she had been in bed six months she entirely lost the use of the right arm and leg which became perfectly numb so that she could not feel a pin prick. The numbness and paralysis continued for a year and then she recovered the use of the arm but she never moved the leg, though the anæsthesia disappeared. After she had been in bed for three years she was sent to a private sanatorium where she remained for six months without improvement. Five years after the onset of the illness she began to get about on crutches. Her left leg moved normally but her right was completely paralysed. She could neither move it nor bear weight on it. About four months after she began to use crutches she lost her balance and fell down a flight of stairs on her head. She was not unconscious but had to remain in bed for four months. For a time she was unable to make any sound and after that she could speak only in a whisper. The family history was negative. On examination the reflexes of the right leg were found active and in no way different from those of the left. But she could not make the slightest movement with the right leg and had never done so for 19 years. The leg was not wasted but the muscles were soft and the joints were relaxed. There was marked toe drop, so that when she lay on her back the toes and the sole rested on the bed. There was no disturbance of sensation in the leg and the electrical reactions were normal. She was told that she could be taught to speak by developing "head tones" in the way that pupils without natural singing voices learn to sing. In a properly trained voice the upper tones seem to come from the head through the nose, which may be felt to vibrate. After explaining this to her she was told to take hold of her nose and try to say "nee." After about a week's practice she succeeded. Of course, the moment she made this sound she had used her vocal cords. The next exercise was to make the combination "hm-nee-ah," the first sound being made with the mouth closed and the others with it open. She most faithfully practised this by herself, for no one would help to teach her as the proceeding was considered silly and impracticable. After six weeks a natural-speaking voice was developed. At first she could speak loudly only by singing or by intoning in a higher pitch than her natural one. Gradually she developed the lower tones and became able to speak with a natural voice and without concentrating her whole attention on the matter. It was much more difficult to develop the use of the leg. A plaster bandage was put on it which she was told would prevent the knee from bending and enable her to stand on the leg and push it along. Every day she was made to stand and attempt to walk, the right leg being pushed along while she was held. It was found that she had completely lost the power of balancing. She had great difficulty in learning it. For the first six weeks she could not make any movement in the leg, not even of the toes. Then the plaster was taken off, the muscles were stimulated with the faradic current, and she was taught to make movements with the aid of the current. The first movement which she made was with the toes. In the following month she learned to make every movement of the foot and leg. The exercise of attempting to walk was kept up daily, the knee and the ankle being bandaged with flannel to prevent them from bending and the toes being held up with an elastic apparatus. She gradually learned to balance and to walk with the aid of a cane and the bending of the knee and the ankle and the toe drop disappeared. In January, 1904, she returned home able to speak naturally without any special effort. But her ability to walk depended upon concentration and effort. Under constant persuasion and with the aid of gymnastic instruction she maintained what she had gained but did not improve in the next three months. She then had a severe attack of influenza which kept her in bed for a long time and when she went to see Dr. Baldwin in June, 1904, she had completely lost the use of the right leg but she spoke normally. In addition there was contracture of the flexor muscles of the leg. Six weeks of daily teaching and effort were required before there was any movement of the muscles of the leg. Then she gradually improved. She learned to walk and could do so for a mile without the use of a cane. From the middle of September to January, 1905, she had walked 150 miles. She was able to go shopping alone and instead of being a chronic invalid became an active member of society. She gained 18 pounds in weight.

THE SHALLOW WELL.

AT the request of the Essex county council the medical officer of health has prepared a report on the rural water-supplies of the county. The report shows that during recent years a large portion of the area on the London clay has become supplied with water from deep wells or sources at a distance, the water being conveyed through a large number of parishes in mains. In some cases these are owned by public companies but in at least four instances they belong to the rural sanitary authorities. In fact, such mains now ramify through some of the most thinly populated districts and are said to be models of rural water engineering. A very large portion of the county continues to be supplied with water from shallow wells and it is pointed out that notwithstanding this the typhoid fever case-rate is exceedingly low, only about half that of the urban areas supplied by the metropolitan and other waterworks. Dr. J. C. Thresh also states that in his experience few cases of typhoid fever are traced to the use of shallow well water, compared to the number attributed to the use of water from brooks and from unprotected springs, and that when well water has been the cause there has always been some very obvious error in construction permitting of the ready access of polluting matter. He asserts emphatically that he has never traced a case of

typhoid fever to the use of water from a properly constructed well, that is, from a well so protected that no water can enter without having percolated through eight or more feet of compact subsoil. He, therefore, points out that no one need hesitate about residing in the country merely because water has to be obtained from a shallow well, since by selecting a proper site and constructing the well with due care water can be obtained which is as safe as that supplied to any town. In a special section sanitary authorities are advised as to the steps which they should take to improve the water-supplies in their districts, and they are particularly recommended not to grant "certificates" to newly erected houses unless the water-supply is quite satisfactory and to furnish builders and others with instructions as to the proper construction of shallow wells, at the same time intimating that "certificates" will not be granted on shallow well supplies if such wells are not properly protected. This advice should be taken by rural authorities generally but it is a great advantage and a great benefit to the community when the county council is sufficiently enlightened to appoint a medical officer of health whose standing and experience qualify him to offer such advice and whose services are available over a large area. Such services are worth far more to a county than the most liberal remuneration that the officer receives, a fact which cannot be too strongly impressed upon those county councils which have not yet appointed such officers.

FIRST AID TO JOCKEYS.

OUR attention is drawn by a correspondent to a defect in provision of medical attendance which certainly demands remedy. We refer to the want of precaution which obtains as regards the presence of a surgeon at the Liverpool race meetings, particularly in the case of the race for the Grand National. As many of our readers no doubt know, the course over which the steeplechase is run is one of the most severe that exists. The "fences" are high and the water jumps broad and, if further evidence were necessary to convince those who have never seen the Grand National course of the danger incurred in riding over it, the fact may be adduced that within the last three years out of 110 horses which have started for the race only some 40 odd have finished the course. It is obvious that where so many horses come to grief there must be considerable chance of injury to their jockeys. We believe it is the case that injuries more or less severe are common in all steeplechases and the Grand National is very far from being an exception to the rule. It would appear, then, to be a mere matter of ordinary foresight and humanity to insure the presence of a medical man, so that at least the removal of an injured jockey might be effected in a proper manner and so that any immediate remedy which is applicable might be applied. Dislocations, for instance, are common in riding accidents and may, of course, often be advantageously corrected at the earliest moment. We will not enlarge, however, on the obvious desirability of having a medical man on the spot at such race meetings. The fact is well recognised and at many, if not all, of the smaller steeplechase meetings a surgeon is regularly engaged by the authorities. The extraordinary thing is, as our correspondent points out, that at a meeting at which accidents are most to be expected, no such arrangement holds. If a jockey is hurt a notice is run up "Doctor wanted." If a medical man happens to be present he is sure to be willing to give his services but if not *tant pis* for the jockey. Liverpool abounds in able surgeons and there could be no difficulty in obtaining competent medical assistance for a salary well within the means of the authorities. The stands alone, we believe, earn many thousands of pounds. We trust that the attention of some member of the Jockey Club may be drawn to this matter, so that pressure may be brought to bear upon the proper persons to insure an alteration being effected in a state of things that is certainly at present far from creditable to those concerned.

ADVANCED PHARMACOLOGY AND THERAPEUTICS AT CAMBRIDGE.

IN addition to the ordinary classes in general pathology and pharmacology it is intended to organise at the Pathological Laboratory of the University a series of short courses in which more advanced work will be dealt with. In the pharmacological section such subjects as bronchial asthma, vaso-constriction, the action and therapeutic value of adrenalin, the specific action of drugs, and the relationship of tolerance to immunity will be taken up by Dr. W. E. Dixon. In the pathological section Dr. G. H. F. Nuttall will deal with protozoa and the protozoal diseases, including the hosts and carriers of these protozoa, with sleeping sickness, kala azar, malaria, red-water, small-pox, and other fevers. In general pathology the subjects specially treated will be inflammation, immunity, antitoxins, bacteriolysins, hæmolysins and other "antibodies," food poisoning, and certain clinical methods arising out of recent investigations. We are glad to draw the attention of our readers to these courses as the demonstrations, being under the direction of Professor G. Sims Woodhead, professor of pathology in the University, are sure to be of the most practical and modern description.

PSYCHOSES DUE TO TRAUMA.

IN reporting a case of mental disorder due to trauma in the *Allgemeine Zeitschrift für Psychiatrie*, vol. lxi., part 3, Dr. J. Wende comments on the rarity of this condition and gives some interesting figures. Thus Sachs and Freund could only with difficulty find a few instances amongst 20,000 cases of accident, whereas cases of traumatic neuroses occurred in abundance. Edel of Charlottenburg, dealing with material collected during two years, could only find cases of traumatic psychoses in some 2½ per cent. of all cases under treatment in that district where the large resident population of railway employés furnishes numerous cases of disorders due to accidents. Other statistics are those of Wagner (three cases of psychoses amongst 90 of head injury) and Stolper (12 cases amongst 981). It is pointed out that in these two latter instances the figures were collected from amongst workers in mines, in whom severe injuries of the head are unusually frequent. In the Franco-German war, amongst 8985 cases of injury of the head the Prussian "Sanitätsbericht" notes only 13 of mental disorder. Dr. Wende points out that in determining the mode of operation of an injury of the head it is necessary to distinguish between psychical and mechanical effects, for either may suffice to originate mental disorder. Where the effect is in the main psychical such disorder would not be expected to follow except in a predisposed individual. The mechanical effect, apart from cases of profound injury to the skull and the brain, consists in cerebral concussion, and this, according to the investigations of several writers whom Dr. Wende quotes, involves primarily the vaso-motor system and the walls of the blood-vessels; in the latter changes are found, such as hyaline degeneration, round-cell infiltration, aneurysmal dilatation, and endarteritis obliterans. As a result there are disturbances of nutrition with regressive changes in nerve cells and neuroglia cells. Cerebral concussion may be slight in degree and yet result in serious psychical disturbance. The traumatic psychoses present no uniformity of symptoms but comprise the most diverse states, from well-known mental disorders to those of undetermined character. There is, however, a prevailing

tendency to dementia. With the above remarks Dr. Wende introduces his case, in which the psychosis was of a purely traumatic nature, occurring in an individual physically and mentally sound. The patient, a male, aged 33 years, fell off a scaffolding nearly seven feet high and his forehead struck an iron screw (presumably lying on the ground), sustaining a wound, not very severe, about four centimetres in length. The bone was not fractured. He was rendered senseless but soon recovered sufficiently to stand and to walk with help. Giddiness and vomiting followed. There gradually supervened headache, with pains on pressure over the anterior half of the skull, great impairment of memory, paroxysms of extreme anger, and, later, increasing mental enfeeblement, with retardation of the processes of thought, slow mental reaction, loss of will power and of initiative, inability to notice, to read or to write, and complete failure of power of self-orientation in time and space. This condition was still present two years after the accident; the patient was noted as being absolutely apathetic and indolent; he complained, however, of severe pains about the head, the loins, and the limbs. He kept himself clean and attended to the calls of nature. Physically he had deteriorated greatly, being very thin and pale, the reflex excitability had increased, and there was some ataxia, with Romberg's symptom. The article closes with a useful summary of literature, chiefly German, on the subject dealt with.

BREAKING UP THE STREETS.

WE have on many occasions animadverted upon the way in which road-breaking companies—that is to say, gas, water, telegraph, hydraulic power, and electrical companies—invariably seize upon a newly laid road in which to dig trenches and to alter their mains. The Westminster city council through its engineer has issued a circular announcing that it is the intention of the council to re-pave sundry streets within the city of Westminster on or about certain dates which are duly set out. The circular further states that the various trenching companies have been informed in order that they may carry out any alterations or repairs to their mains and service immediately prior to, or during the execution of, the proposed work with a view to obviate interference with the pavement by them in the near future. We think that this is an admirable departure on the part of the city of Westminster but we very much doubt if the various trenching companies will do anything to fall in with the wishes of the Westminster city council. We see that Bedford-street, in which we are more immediately interested, is to be "up" between July 27th and August 8th and we shall watch with interest to see how long the new paving is allowed to remain undisturbed. We further see that Charing Cross, from Northumberland-avenue to the Strand, is to be re-paved from August 10th to 31st. As this area has been in a chronic state of eruption for the past six months or so we may hope that when the re-paving has been completed it may be allowed to remain undisturbed for at least the following six months.

PASTEUR FILTRATION AND ENTERIC FEVER.

AN interesting and instructive report by Lieutenant-Colonel H. H. Johnston, C.B., R.A.M.C., on enteric fever among the *personnel* of No. 4 General Hospital, Mooi river, Natal, with reference to drinking water appears in the April number of the *Journal of the Royal Army Medical Corps*. Some years ago Lieutenant-Colonel Johnston conducted in the Public Health Laboratory of the University of Edinburgh some experiments on the relative efficiency of filters from the point of view of removing micro-organisms from water. He found that the Pasteur-Chamberland filter was superior to the other filters (of the bougie type) examined, the water being completely sterilised during six weeks' continuous filtration under pressures ranging between 13 pounds and 46 pounds to the square inch. These experiments he now finds are confirmed in actual practice, so far as the prevention of enteric fever is concerned. In spite of filtration enteric fever was prevalent among the whole *personnel* of the hospital, but in proportion to strength about three times more prevalent among the *personnel* employed in other parts of No. 4 General Hospital than it was among the *personnel* employed in the enteric fever wards. The general prevalence of enteric fever may be accounted for by a common source of infection, such as contaminated drinking water, while the greater prevalence among the *personnel* employed in other parts of the hospital than the enteric fever wards may be partly explained by the large number of unrecognised cases of enteric fever in patients transferred from other hospitals to the surgical division of No. 4 General Hospital in which special and adequate precautions to prevent the spread of the disease were not taken before the true nature of the disease was recognised. During the first five months, January to May, 1900, 31 cases of enteric fever were contracted, whereas during the following 26 months, when Pasteur-Chamberland filters were substituted for those which had failed, only eight cases of this disease occurred. A large automatic syphon-action Pasteur-Chamberland filter was taken into use on June 2nd, 1900, and 11 days later (allowing for the period of incubation) enteric fever, which up to that time had been very prevalent, ceased almost altogether, and only eight cases of this disease occurred during the 26 months, compared with 31 cases during the first five months when another system of filtration was in use. Lieutenant-Colonel Johnston points out that filters that require daily sterilisation are impracticable in field service and as a matter of fact it is never done in actual practice, so that only those filters, such as the Pasteur-Chamberland, which work continuously—i.e., which do not require to be sterilised at short intervals—are of any real utility and value.

MEASLES WITHOUT ERUPTION.

IT has been occasionally noted that during an epidemic of measles cases occur presenting fever, coryza, conjunctivitis, and bronchitis, but without the typical exanthem, and the name *morbilli sine eruptione* has therefore been applied to them. By some authorities the existence of such cases has been denied—e.g., Monti regards them as mild cases in which the eruption has been overlooked. The absolute proof that these cases are examples of measles can obviously only be forthcoming when the infective agent of measles has been isolated and its presence shown in them. At the same time there is sufficient evidence to render highly probable the view that at any rate some of these cases are measles, since they occur in families of which other members are simultaneously affected with undoubted measles and are said to prove immune on subsequent exposure to infection. An interesting example is recorded by Dr. Salzer of Worms in the *Münchener Medicinische Wochenschrift* of Feb. 21st. In a family of six children a boy, aged eight years, developed measles on Oct. 30th, 1904, and was isolated to try to avoid infection of the younger children, two pairs of twins aged respectively three years and 15 months. In spite of this all four children developed the prodromata of measles with distinct red spots on the gums on Nov. 10th. On the 13th three of them developed the typical exanthem and the cases progressed in the normal manner. The fourth patient, one of the younger twins, aged 15 months, was very weakly and ill-nourished and developed severe bronchitis, from which he died on Nov. 27th. During this period no trace of rash developed, although careful watch was kept for it by the mother, the nurse, and by Dr. Salzer himself. In the issue of the same journal dated March 21st Dr. Schütz of Schriesheim

records two cases of similar character, though less severe, occurring in his own family. During a severe epidemic of measles in January of this year his three children sickened at the same time with the typical prodromal symptoms of measles. In one, a girl aged seven years, spots appeared on the gums, followed by a characteristic rash spreading over the whole body, associated with a very severe attack of capillary bronchitis. The other two children, a girl aged nine years and a boy aged six years, though presenting all the symptoms, including conjunctivitis and bronchitis, did not develop any sign of rash or of spots on the gums. It is noteworthy that these cases were both milder than that with the rash and this is usually the condition observed when the rash does not occur, unlike the case recorded by Dr. Salzer, which was fatal. Such cases are probably not common and although usually mentioned in text-book descriptions of the varieties of measles are dismissed with mere passing reference. At the same time they are of some importance, as assuming their nature proved they are probably no less infectious than cases of the ordinary type and thus require the same precautions. It is not surprising that the eruption of measles should occasionally fail to appear when we remember that it may sometimes be considerably postponed, according to Trousseau, until the sixth, seventh, or eighth day of fever, and according to Sir Thomas Watson even until the tenth.

THE medical officer of health of the Cape Colony states that for the week ending March 18th the condition of the colony as regards plague was as follows: At Port Elizabeth 1 case of plague in a native woman was discovered on March 17th and at East London 2 cases, both Indian males, were discovered on March 13th. Plague-infected rodents were found both at Port Elizabeth and at East London. In other districts no case of plague in man or other animal was discovered. At Brisbane during the week ending Feb. 25th 3 cases of plague occurred, the patients being respectively a married woman, a school boy, and a man. The last named died. As regards Hong-Kong, a telegram from the Governor received at the Colonial Office on April 10th states that for the week ending April 8th there were 3 cases of plague reported and 3 deaths from the disease.

AT the stated business meeting of the President and Fellows of the Royal College of Physicians of Ireland, held on April 7th, Dr. William Osler, Regius professor of medicine in the University of Oxford, was elected an Honorary Fellow of the College, and Dr. E. J. McWeeney, professor of pathology and bacteriology in the Catholic University, Dublin, was elected a Fellow of the College.

A MEETING of the Royal Microscopical Society will be held at 20, Hanover-square, London, W., on April 19th at 8 P.M., when there will be an exhibition of pond life.

OWING to Lord Strathcona being unavoidably detained in Canada the festival dinner of the National Hospital for the Paralysed and Epileptic has been postponed.

MOSCOW MEDICAL CONGRESS.—Laffan's New Bureau states that over 1000 medical men are attending the Medical Congress in Moscow, at which measures for the prevention of cholera are being discussed. The Congress elected Dr. Tschinokaieff and Dr. Elpatyevski joint presidents. Both have recently returned from exile. Much anxiety is felt, as it is feared that an outbreak of cholera will follow the winter epidemics of typhus fever that have occurred in the capital and other towns.

MEDICINE, ITS PRACTICE AND ITS PUBLIC RELATIONS.

CHAPTER VII.[1]

THE NAVAL AND MILITARY MEDICAL SERVICES.

The Army Medical Service.—The Old Abuses.—Semi-Military Titles.—A Royal Corps.—The Boer War.—Mr. Brodrick's Committee.—The Present Warrant.

MEDICAL officers of the army, of the Indian Service, and of the navy are appointed after a competitive examination between candidates, who must be duly registered medical practitioners, British born, and between the ages of 21 and 28 years. The examinations are fairly severe but their competitive character on some recent occasions has undergone no serious test owing to a lack of aspirants for commissions.

The full particulars regulating the position of the medical officer in the army, in the Indian Medical Service, and in the navy will be found in the Students' Number of THE LANCET, as well as in the official warrants of the respective services, and no purpose would be served by reproducing them here. But while it is unnecessary to go with detail into the conditions under which commissions are granted, it is important briefly to review the state of the three services in respect of *personnel* and emolument. Although none of them calls for many officers, still, taken together, they constitute a considerable section of the medical profession. Also the standing and social position accorded to medical officers of these three services cannot fail to have a reflected influence upon the medical profession in general, while the relations of the medical officers of these services to the public are highly important at the present moment, when the nations of Europe are armed to the teeth for the preservation of peace, and when our newspapers are surfeited daily with the horrors of the Far Eastern struggle. Good armies and good navies require a good medical service—indeed, they are neither good armies nor good navies without one—and the relations of the medical man to the public could not be better exemplified than by an inspection of the position which is occupied by the medical men in whose charge the health of our army and of our navy lies. There is also this great practical use in discussing the status of the medical officer of the army, of the Indian army, and of the navy—improvement may follow, and has followed, upon proved abuse. The conditions of service can be altered at any time at the will of the authorities, so that amendment can result quickly if the need for amendment can be shown. This is quite different with most of the circumstances which, as we have seen, tend to detract from the happiness and the utility of civilian medical life. These are due, mainly at all events, to the social condition of our country at the present day and are not capable of immediate reform. The depopulation of the rural districts and the half-education of the masses have had influence in bringing about abuses of contract practice and wholesale resort to quackery, which cannot be altered at once by legislation. The natural course of progress towards better things can be assisted by intelligent legislation, but Parliament cannot at one stroke remove grievances which are dependent upon general factors in modern sociology. The exact opposite prevails in the naval and military medical services. The terms of employment are concrete and by the alteration of a regulation here and there the lot of the employed can be at once transformed, their pay can be raised, their burdens can be lightened, and their position made in every way better.

Despite the abuse that has been freely dealt out to the

[1] Chapters I., II., III., IV., V., and VI. were published in THE LANCET of Feb. 18th (p. 447) and 25th (p. 517), March 4th (p. 593), 18th (p. 736), and 25th (p. 817), and April 1st (p. 877), 1905, respectively.

Admiralty, the War Office, and the Government of India because of their unsympathetic attitude towards their medical services it will be seen that the position of the officers of all three departments has been altered quite recently for the better in response to representations. The scientific ideal of our great bureaux is not high when medicine is in question, but it is stupid to represent the departments as wantonly and purposely unfair towards the medical man. Moreover, medical men have themselves much to answer for if the scientific side of medicine is occasionally belittled. Professor T. Clifford Allbutt, Regius professor of medicine in the University of Cambridge, recently called attention to the unscientific or even anti-scientific tone of the Army Medical Service as exercising a deterrent effect on medical candidates of a superior class. He spoke as being in possession of information showing that the senior medical officers in this service have a lack of appreciation of the scientific work of their juniors. "Science doesn't pay" expresses the views of these military-minded persons and this is the spirit which has damaged the three services so much and which, if it is not eradicated, will even now prevent their resuscitation.

The three services are taken in the following order: the Army Medical Service, the Indian Medical Service, and the Naval Medical Service, and in each case the old abuses are considered alike where they influence existing conditions, the present circumstances of the service, and the chances of improvement. In the case of the Indian Medical Service I have entered purposely with considerable detail into the matter of pay, as in this service the pay is distinctly bad. The scale on the civil side has not been altered for 30 years and unless alterations are made with promptitude the Government of India will be embarrassed seriously by the dearth of medical officers.

The Army Medical Service.

The Army Medical Service has been the best abused section of the medical profession. The public has slighted it, the War Office has neglected or mismanaged it, and its members have been in prolonged revolt against their conditions of employment. There is no use in going at any length into the disputes which for years raged in the medical journals under the title "The Reform of the Army Medical Service" and which have not yet been settled. But the various steps by which the department has been transformed during the last 14 years into what it now is must be outlined, for the past history affects the present condition and not in a very fortunate manner.

During the "eighties," and no further retrospection will be attempted, the service was full and fairly popular. The instruction at Netley, being intrusted to professors for whom no provision for superannuation or retirement had been made, tended to fall behind modern standards but the public did not lose much by this, for there was good competition for the commissions and a fairly able class of surgeon on probation was recruited. But a change came over the face of things in the next decade. That the conditions of employment were in some respects unfair became manifest. For example, it was not easy for an officer of the Army Medical Service to obtain satisfactory sick leave on full pay. He could have six months' sick leave on full pay, and this leave was renewable once. After that he went on half pay, unless the medical board from the first gave him a prolonged leave for his recovery—a privilege which was rarely, if ever, granted. Again, at a time which was marked by many-sided developments in medical knowledge, when in all the medical schools of the country the more brilliant and ambitious students were striving to benefit by the results of modern research, the Army Medical Service offered no inducements to scientific men. Thirdly, a difficulty experienced by the officers of the Army Medical Service in obtaining entrance to the "Service" clubs was not calculated to increase the demand for commissions. And so, for this reason or that, the applications fell off and competition became a pretence, for there were more vacancies than candidates. In 1891 came a new warrant which it was hoped would meet a case to the seriousness of which the War Office was awakening. This warrant provided that the officers of the Army Medical Service should have sick leave on full pay on the same conditions as those laid down for regimental officers and at the same time the designations of the departmental ranks of the Army Medical Service were altered by the granting of semi-military titles. The question of the use by medical men, who are officers in the army, of military titles is an unsettled one still in many minds. But the officers of the Army Medical Service were almost unanimous in their desire for this innovation, as being calculated to make their general position less insecure and anomalous; their brother officers of the Indian Medical Service had the same opinion, although not perhaps quite to the same extent; both were heartily backed in their views by the British Medical Association and the warrant granted their desire. All now should have been well, but, as a matter of fact, nothing happened. The Army Medical Service did not become more popular, the position of the officers did not improve, and the competition for commissions grew no severer. One class of young medical men were kept from joining the army by the difficulties that they heard would be put in the way of any desire to do original work. With another class the exclusion from "Service" clubs rankled, for many good men, forming the material from which members of a medico-military corps ought to be drawn, felt strongly that it would wound their self-respect to join a service where they were regarded by their brother officers as good enough to work with but not good enough to play with. Lord Wolseley, at that time Commander-in-Chief, was believed, with some show of reason, to view with dislike any acquiescence in the claims of the medical officers. Notwithstanding the multiplication of military-medical duties both at home or abroad, and notwithstanding the increase in the size of the army, the *personnel* of the Army Medical Service was less by 400—i.e., about 30 per cent.—than it had been after the Crimean war. The depletion of the establishment produced an unfair incidence of foreign service, great difficulty in obtaining reasonable private leave, and a constant change of station whereby hardship and expense were entailed upon officers of moderate means, especially if married.

In 1898 another new warrant was issued, under which the Army Medical Service took its place as a Royal corps side by side with the other scientific branches of the army—namely, the Royal Engineers and the Royal Artillery—a position which reformers had contended that it should properly and legitimately occupy. At the same time, and in analogy with the use of military titles by the Royal Engineers and Royal Artillery, such titles were assigned to medical officers up to and including the rank of colonel, so that there could no longer be any doubt about the exact army rank of the officers of the Army Medical Service. The warrant dealt simply with the constitution of the new Royal Army Medical Corps, but the regulation with regard to the use of purely military titles afterwards came into force in the Indian Medical Service. There seemed no reason why the Royal Army Medical Corps should not now become a deservedly popular service and attract a number of well-trained candidates from the universities and medical schools. THE LANCET, after the promulgation of this warrant, said, "Lord Lansdowne has done all he could to secure medical officers an assured rank and honourable position in the army worthy of the profession to which they belong, and his efforts in this respect deserve to

be ungrudgingly and gratefully recognised." And many senior officers thought that the concessions of the War Office would prove successful in inducing a large and good class of men to compete for commissions in the Royal Army Medical Corps at the succeeding examinations. But again nothing happened.

The grievances of the service were so manifest that its advantages were lost sight of and yet these were, and are, very real. Medical employment in the British army offers, as a matter of fact, unrivalled opportunities and the records of certain officers show that it is not impossible to seize upon them. The sphere of activity is world-wide. Not even in our navy is there an equal chance of studying the diseases peculiar to particular lands and the imagination and professional interest must be dull indeed which cannot be quickened by a consideration of the varied field in which an officer of the Army Medical Service finds himself. The red tape, of the restricting bonds of which so much is talked, has not been able to stifle much original scientific work. The pay, though inadequate, is certain, and the social conditions, if not perfect, are at any rate more dignified than those of a large section of the civil medical profession. Some writers in the medical press, in the laudable desire of benefiting the officers of the Army Medical Service, appear to have damaged that service by the persistence with which the darker side was always presented. At any rate the medical profession and the teachers in the medical schools did not regard the warrant of 1898 as satisfactory and the Army Medical Service remained nearly as short of men as ever, which meant that the hardships dependent upon undermanning remained acute. And just when the service was in this condition, unpopular, dwindling, and overworked, the tremendous strain of the South African war was thrown upon it. What followed is too well known to need more than the barest recapitulation. Splendid work was done by officers of the Army Medical Service, but the department as a whole came in for severe criticism. Not one of the popular books dealing with the South African campaign failed to give a chapter or more concerning the Corps; while the serious works, as well as the letters of medical men at the front, dealt with its deeds in copious detail. Explanations of, and remedies for, the deficiencies which observant writers noticed in the medical work at the front were forthcoming in every direction, while deeply ignorant persons rushed to the rescue with impossible remedies for non-existent conditions. From every side, in fact, there was offered a rich choice of prescriptions for reviving the drooping condition of the Army Medical Service. Testimony to the devotion and skill of individual members of the Corps was as emphatic as any of the criticism lavished upon the faults of the system; but condemnation produces more effect and lingers in the memory more persistently than praise and the general idea gathered by the public was that, despite the skill and self-devotion of a few, the Army Medical Service had broken down badly. Of course, it did nothing of the kind. Its work as a department was more affected by the tremendous difficulties of transport than was the work of other departments of the army and all criticism that lost sight of this fact, however generously inspired, was unfair.

After the war came the Royal Commission to inquire into the management of the South African hospitals, the report of which, forming the first well-balanced and authoritative expression of opinion upon the medical conduct of the campaign, proved on the whole favourable to the work done by the Army Medical Service. Upon this followed the institution of Mr. Brodrick's committee for the reorganisation of the Army Medical Service, the personnel of which did not escape criticism. It got to work promptly and in a comparatively short space of time produced a document drawn with care and ingenuity, which was received with an outburst of adverse comment. Conditions were suggested by the committee with the laudable object of obtaining and maintaining a high standard of efficiency which were considered to be vexatious and which, it was thought, might impede in their working the careers of many officers. The document was none the less an honest attempt to show how the service could be placed on a satisfactory footing and many of the apprehensions which were expressed were groundless. One of the principal aims of the committee had been to make use of selection rather than of seniority when promoting an officer to a responsible post, another had been to bring the Army Medical Service into close relation with civil professional life, and a third to hold out inducements to men of scientific attainments to compete for commissions—surely all good aims. Examinations that were threatened resolved themselves, when looked at closely, into tests of a practical and clinical character, almost unavoidable if the principle of selection was to be followed. Six months later—i.e., in March, 1902—came the new warrant which followed the recommendations of Mr. Brodrick's committee fairly closely and under which the Army Medical Service now works.[2] The Royal Army Medical Corps is placed under the supervision of an Advisory Board, consisting of two officers of the service, two civilian surgeons and two civilian physicians appointed by the State, a representative each from the War Office and the India Office, a representative nursing matron, and the Director-General and Deputy Director-General. In this way the service should be managed so that good men may be obtained and kept. By the warrant the Director-General is given an increase of army rank and an increase of pay. The pay of medical officers is increased and provision is made for special pay and charge pay. The door is opened for scientific and professional study and for professional merit and distinction. By one new regulation a lieutenant on probation who at the time of passing the examination for admission to the Royal Army Medical Corps is holding, or is about to hold, a resident appintment in a recognised civil hospital, can be seconded for a period not exceeding one year, during which he is holding the appointment. While seconded he receives no pay from army funds but his service reckons towards promotion, increase of pay, gratuity, and pension. This is a distinct bid for a high class of candidate. And other regulations seek to insure the maintenance of a good standard. An officer is eligible for promotion to the rank of captain on the completion of three and a half years' service and to the rank of major on the completion of 12 years' service, "*provided that in each case he has previously qualified in such manner as may be prescribed by the Secretary of State.*" This regulation has seemed to some to foreshadow the examination in school work of men of mature years, much of whose time has been necessarily spent far away from books. But the belief has since grown that the subjects of examination would be as a rule of a thoroughly practical and clinical character, while it is clear that tests must be exacted if the principle of selection is to be followed. If an officer passes with distinction the examination qualifying for promotion to the rank of major the period of service required to render him eligible for the rank of major or lieutenant-colonel is reduced. In other words, promotion now comes largely by selection. Due provision is made for promotion to brevet rank and for distinguished service, and retirement at 20 years on £1 a day, one of the most attractive features of the service and one which was said to be in danger of alteration, is allowed to remain.

The Army Medical Service having laboured under many disadvantages and its work in South Africa having been unjustly belittled and discredited will require time to recover its popularity. But the present warrant seems to promise

[2] The warrant will be found published in full in THE LANCET of March 29th, 1902.

better things. It would be rash to prophesy more exactly, for the Advisory Board is still new to its work and can hardly be said to enjoy the confidence of the whole Service. Its functions are not as clear as they might be and there is difference of opinion as to the advisability of purely disciplinary and administrative matters being left to its jurisdiction. The selective principle has not had time to display its value, though the recent choice of a Director-General shows that it is intended to give the principle a thorough trial. Under Mr. Brodrick's abortive army scheme the Director-General of the Army Medical Service had a seat at the Army Council but Mr. Arnold-Forster's scheme relegates him to a place in the Quartermaster-General's department. Medical affairs would have had a much better chance of being understood if they were represented by a spokesman at the Army Council, and the exclusion of the Director-General from this body must be regarded as lamentable.

(To be continued.)

PROPOSED CONFEDERATION OF LONDON MEDICAL SOCIETIES.

AN important meeting of members of the medical profession was held under the chairmanship of Sir WILLIAM S. CHURCH, President of the Royal College of Physicians of London, in the hall of the College, Pall Mall, London, on April 10th. The meeting was attended by over 200 medical men, many leaders of the profession in London being among them.

Sir WILLIAM CHURCH opened the proceedings with a statement in which he said that the attempt to unite the various medical societies of London had repeatedly been before the medical public but had hitherto always failed. In 1808 the Medical Society approached the Royal Medical and Chirurgical Society with the request that the two societies should form a society with a fresh name and a new habitation. That attempt failed owing to there being some doubt whether the proposed change of name and place might not invalidate the title that the societies had to certain properties. In 1850 the Pathological Society approached the Royal Medical and Chirurgical Society with a view to incorporation with the latter but the plan came to nothing owing to various minor details. In 1860 a serious attempt was made to join the Medical Society with the Royal Medical and Chirurgical Society and the subject occupied the attention of the medical world for some 16 months, but after all the deliberations came to nothing. In 1867 the Medical Society again approached the Royal Medical and Chirurgical Society with the proposal that they should unite, but nothing came of that. In 1870 there was another attempt to join the two societies together and communications between them went on for nearly two months, but once more nothing took place. Then there was the attempt made by the late Sir Andrew Clark in which, though the societies themselves did not come into official communication, those interested met frequently at the house of Sir Andrew Clark and conferred together. Once again nothing came of these deliberations. Those who were interested in the present movement thought it best to propose that a new central body which he would call and speak of as the Royal Society of Medicine should be established and that all the existing societies should be regarded as subdivisions of it. The idea was that the existing societies should not lose their present individuality and that they should remain as societies embraced and covered by the wing of the Royal Society of Medicine. There could be no doubt whatever that great advantage would ensue if some such society were to be established which would embrace the whole of medicine and all the sciences affiliated to medical practice. Medicine of the present day, in consequence of the enormous advances in knowledge and of the necessity of now making use of special instruments, was necessarily split up into a large number of branches; and rightly enough each of those branches wished to have its own society for the furtherance of that portion of medicine in which the members of the society were especially interested. There seemed to be a certain amount of danger that those special subjects in medicine might get to be regarded as dissociated from general medicine. Anything that would tend to keep up the close connexion between general medicine and those special branches was to be encouraged in the interest of medicine. All the component societies in the new scheme would gain in prestige by being portions of the Royal Society of Medicine of the metropolis of the kingdom. The Fellows and associates of the proposed Royal Society would certainly enjoy a much greater advantage than was possible for them to have at the present time without increased expense. It was thought that there would have to be two grades in the society—namely, Fellows and Associates. The Fellows would join the Royal Society of Medicine on certain financial terms which would give them the right of being present at all the meetings of the included societies. The Associates would be formed of those who preferred to be members of one or more sections of the society and who would have certain advantages and privileges by belonging to the Royal Society of Medicine, such as the use of the library and all the rooms of the society. If any such scheme was carried out it would be necessary to have more accommodation than there was at present at 20, Hanover-square, but those premises were capable of being enlarged to give a bigger meeting room and to provide smoking rooms and tea rooms. In fact, the premises would be much more comfortable than they were at the present moment. The Associates would therefore have certain rights, but as to what those would be he did not know himself, they must be left to be worked out by a committee. With regard to the question of what societies would be likely to join they might take as a working basis the societies that met at 20, Hanover-square and 11, Chandos-street. By that it must not be by any means implied that other societies were to be excluded, but it was merely wished to begin the discussion by taking those societies which seemed to be likely to join in the proposal. The societies referred to that met at 20, Hanover-square and 11, Chandos-street, were societies representing special branches of medicine, but there were also two societies which everyone had great regard for—he referred to the Harveian and to the Hunterian, which were general societies. He did not wish to imply that those two societies should be excluded but he only wished to point out that they were somewhat on a different footing to that of the special societies which met at 20, Hanover-square, and 11, Chandos-street. Continuing, Sir William Church observed that it seemed to him essential for the carrying out of the proposed scheme that the Medical Society, which was so important and powerful, should join in the movement. The Medical Society and the Royal Medical and Chirurgical Society were the only two societies which had any considerable amount of property and if such a combination as was suggested was made they would depend a good deal on the income which might be received from the property of the Medical Society to assist in maintaining the proposed Royal Society of Medicine. He thought it was desirable to face the fact that unless they found that the Medical Society was willing to consider the matter they did not see how they were to provide the extra accommodation and advantages proposed and at the same time to diminish the expenses of individual members. All the details of the necessary subscriptions and arrangements for the government of the society should be left for the consideration of a committee to be appointed at that meeting, which would have the duty of formulating a scheme to be laid before the medical profession later. Allusion had been made to the advantage of the proposed Royal Society having all the different sections of medicine under its wing, but attention should be drawn to the advantage to be derived by British medicine from the proposal. The separate sections of the society would receive and consider their own communications as each thought proper and publish monthly all the papers, while the parent society would with a strong publishing committee select from the communications made to all the various societies under its wing and publish them as the transactions of the Royal Society of Medicine, and such transactions would form a most valuable addition year by year to medicine and would be representative of British medicine. Sir William Church concluded by saying that he had received many communications all from men of note and from the presidents of most of the societies mentioned, all of them favourable to the idea of confederation, though of course all were not unanimous as to the exact scheme. Sir John Burdon

Sanderson, President of the Pathological Society, had written to say that he was strongly in favour of such a combination of societies being made some years ago and he was still in favour of the proposal. Several gentlemen who did not hold official positions in the various medical societies had expressed the hope that something would come out of the present meeting. Sir William Church was then handed a telegram which was found to be from Mr. J. Tweedy, President of the Royal College of Surgeons of England, regretting his inability to be present at the meeting.

Sir FREDERICK TREVES proposed the following motion :—

That in the opinion of this meeting, convened by the President of the Royal College of Physicians and composed of Fellows and Members of the medical societies of London, it is highly desirable that an effort should be made to unite the principal societies into a new body, to be known as the Royal Society of Medicine.

He said that the amalgamation proposed would have obvious advantages in many directions. In the first place it would have the great advantage of convenience to have all the branches of medicine represented under one roof and it would be also economical. At the present time each society had its own management, its own premises to provide, and in many cases its own library. The money expended by these various societies was scattered through so many channels that if the proposed amalgamation could be carried out the result must lead in the direction of economy. It was very desirable that the science of medicine should be able to face the scientific world as a coherent whole. There was so great a disposition for the special branches of medicine and surgery to diverge that it would not be detrimental to any specialty to remain under the general ægis of medicine. He was certain that the proposed union would lead to a combination in the various branches of medicine which was very desirable and would secure a stronger position for the science of medicine as a science. The proposed society would not, he imagined, concern itself with politics or medical ethics but would be devoted to the science and art of medicine in the widest sense of the term. In his opinion, those who founded the Medical Society and the Royal Medical and Chirurgical Society intended to include all medicine and surgery in their schemes. He pointed out that the proposed amalgamation must involve sacrifice and it certainly would involve sacrifice of sentiment. Sir Frederick Treves concluded with an appeal for the proposal.

Sir THOMAS SMITH, in seconding the motion, said that he believed that the proposed amalgamation would be greatly to the benefit of all concerned. In 1870 he was occupied with Sir George Burrows and others in endeavouring to carry out an amalgamation of the medical societies. He knew some of the difficulties which they had to meet and if the scheme was to be carried through it would require that a very considerable majority of the members of the various medical societies should give their adherence to it, otherwise, in his opinion, it was not worth while going into the details of the proposal.

Mr. JOHN LANGTON said he wished it to be understood that he was speaking merely as a Fellow of the Medical Society and not as its President.

Sir WILLIAM CHURCH here observed that no official communications had passed between him and any society, therefore they were all expressing at that meeting their own individual opinion and nothing said would be taken as representing the feeling of any society.

Mr. LANGTON, continuing, said that he was in a great measure in accord with what had fallen from Sir Frederick Treves and Sir Thomas Smith. The difficulties would be great, for it meant that there would be much giving and little taking. On the whole, however, it would be for the progress of medicine and surgery and for their definite advancement. The societies should not ask what shall we get and what shall we lose but should consider if the proposal was for the advancement of science and in that case the scheme would be for the good of all. The proposal would prevent the great over lapping of work in the societies which might be avoided.

Dr. F. J. MCCANN suggested that the title should be the Royal Academy of Medicine instead of the Royal Society of Medicine.

Sir WILLIAM CHURCH said that it would be open to the committee which was to be formed for the consideration of the scheme to suggest what the title should be.

Dr. MCCANN thereupon withdrew his suggestion.

Dr. C. THEODORE WILLIAMS said that financially the scheme would be a great thing for the junior members of the profession, because instead of being mulcted in some eleven guineas a year they would get all the advantages for three or four guineas. If the proposal was carried out they would be more in the position of some of the foreign academies of medicine.

Dr. T. GLOVER LYON, senior honorary secretary of the Hunterian Society, was understood to say that the proposed scheme would not meet the objects of the Hunterian Society in every particular.

Sir R. DOUGLAS POWELL said that he did not think it had entered into the minds of those who proposed the union of the medical societies to suggest more than the union of the central societies. He thought that it would be a disaster to the medicine of London if the outlying medical societies, which were so valuable in holding together the practitioners in their neighbourhood and in encouraging them to work at special subjects in their profession, were to be merged into one society. In regard to the point of economy, roughly speaking something like £16,000 a year was spent by medical men on the central societies in London. He considered that under the new scheme the work would be more economically carried on.

Mr. D. H. GOODSALL said that the scheme should be so arranged that no society should feel that it had been snuffed out. The more the scheme was considered the more it would be clear what a great saving would be secured.

The motion as proposed by Sir FREDERICK TREVES was then put to the meeting and carried unanimously.

Sir WILLIAM BROADBENT moved the following proposition :—

That the councils of the Medical, Royal Medical and Chirurgical, Pathological, and Clinical Societies be severally invited to appoint two delegates to form, with the President of the Royal College of Physicians, the President of the Royal College of Surgeons, and five other gentlemen, a committee which shall (1) make such inquiries as may be necessary; (2) submit a scheme of union to the various societies for their consideration.

He at once suggested a slight modification of the motion which he had read to the effect that the Medical Society and Royal Medical and Chirurgical Society, as the oldest societies and as having property and libraries, should have two representatives each on the committee. Further, instead of the Pathological Society and Clinical Society having two representatives they each should have one only and the Obstetrical Society and the Epidemiological Society should each have a representative. It would be seen that if the suggestion which he had made was followed the number of official representatives on the committee would be the same but the representation would be on a somewhat broader basis. It was extremely important to recognise that to secure the success of the scheme a great wave of general opinion was necessary in order to carry some of the societies over the difficulties which had hitherto proved fatal to similar schemes. The idea was more than a mere amalgamation; it was, in fact, a new creation which would raise medical science to a higher plane. He considered also that overlapping of work which took place in the societies would be avoided and thereby imperfect discussion of subjects would be prevented. Not only would time be economised but the subjects discussed would be more efficiently and thoroughly treated. He would prefer that the title of the society should be the Royal Academy of Medicine. In regard to the local outlying societies of which Sir R. Douglas Powell had spoken he considered that they also ought to be invited to cooperate in the movement. He admitted that it would be a great misfortune to interfere with the efficiency of these local societies but he thought that they would benefit by becoming connected with the scheme.

Mr. H. F. WATERHOUSE, in seconding the motion, said that there was no intention to snuff out any societies. He thought that they would have a library if the scheme was successfully carried out such as they did not possess at the present moment. In his opinion the benefits to be derived from the proposed union were extraordinary and unlimited.

Dr. WILLIAMS said that the other societies interested in the matter should also be represented on the committee, otherwise how could they put forward their views? The committee must be large and, speaking for himself, if he was in one of the smaller societies he would see to it that it should have an oar in the deliberations. He urged that by following what he had advised harmony would ensue.

Mr. LANGTON contended that they ought to try to give the other societies a say in the matter.

Dr. A. E. GARROD pointed out that inasmuch as the Medical Society and the Royal Medical and Chirurgical Society were the societies that possessed property it would

be better to ask those two societies to appoint delegates and let them arrange for the representation of the other societies.

Sir FELIX SEMON suggested that the two societies possessing property should be asked to send two or three delegates to the committee and that the rest of the committee should be formed by all the presidents of the societies who were asked to form the scheme.

Sir WILLIAM CHURCH suggested that the best way out of the difficulty would be to appoint a committee consisting of two representatives from the Medical Society, two from the Royal Medical and Chirurgical Society, which were really the societies that would bring in the money, one representative each from any other societies that wished to join in the scheme, and the Presidents of the Royal Colleges. This committee should be charged with the duty of making such inquiries as might be necessary and submitting a scheme of union to the various societies for their consideration.

This proposition was then put to the meeting by Sir WILLIAM CHURCH and agreed to unanimously.

The appointment of honorary secretary to the committee was then considered and Dr. Arthur C. Latham was elected.

Dr. JOHN FAWCETT then moved

That a general meeting of the societies concerned be convened in July next, if possible, to receive the report of the committee.

This was seconded by Mr. H. S. PENDLEBURY and carried.

The meeting terminated with a vote of thanks to Sir William Church for presiding, which was moved by Mr. A. WILLETT and seconded by Sir FELIX SEMON.

THE CERTIFICATION OF SENILE DEMENTIA AS LUNACY OR IMBECILITY.

THE patients under the care of the Metropolitan Asylums Board include several thousands of mentally defective persons who are chargeable to the various London Poor-law authorities but are for obvious reasons ill-fitted for retention in either the existing workhouses or pauper infirmaries. Their condition being usually chronic or congenital is necessarily irremediable and they are best dealt with not by certification as lunatics but by simple admission to specially established asylums for imbeciles. The existence of these institutions has much facilitated the work of local Poor-law authorities who have, in fact, been tempted to make too liberal a use of the facilities thus provided and to enlarge the accepted definition of imbecility, by causing it to include the failure of the mental faculties incidental to old age or to general exhaustion from chronic disease. The natural consequence is that the medical superintendents of the imbecile asylums protest against the admission of moribund persons who ought on the grounds both of humanity and expediency to have been retained in the local institutions. The various aspects of the question were discussed at some length by the Metropolitan Asylums Board at a meeting held on Feb. 18th. The subject came up for consideration in connexion with the annual report for 1904 of the imbecile asylum at Caterham in Surrey by Dr. P. E. Campbell, who had drawn attention to the "increasing practice of certifying as lunatics quiet, harmless, mostly senile cases," a practice "much to be deprecated and in a great measure accountable for the recorded yearly increase in the number of pauper lunatics." The medical superintendents of the other asylums having been invited to furnish their views on this subject had all agreed with the remarks of Dr. Campbell. The asylums committee of the Board thought that many patients who had been sent to Tooting Bec Asylum should have been retained in the workhouse infirmaries. On humanitarian grounds alone, the committee stated, that course would seem to be a proper one, for it involved neither the removal of the patients to distances which rendered visitation by friends a matter of difficulty, not to speak of expense, nor the possible injury to their families by the stigma of insanity. The committee recommended that the attention of the Local Government Board should be called to the matter with an intimation that the managers would be glad if they could be furnished with the views of the Board on the subject. It was urged during the discussion which followed that there should be one authority in London for dealing with all cases of imbecility and insanity and that receiving homes should be established where the cases could be diagnosed and sent to the proper institutions.

Speaking generally, we are in agreement with the views expressed by the medical superintendents of the imbecile asylums. That the complaint as to the unnecessary certification of individuals exhibiting mental symptoms differing but little from those of ordinary senility is justified will be admitted, we believe, by all with practical knowledge of institutions for the insane. If the asylums of the Metropolitan Asylums Board have reasons to protest in this matter, so also have the county asylums. Doubtless many elderly persons are sent to asylums with mental symptoms which cannot be regarded as pertaining to physiological old age but which are beyond question pathological. Such persons are often excessively difficult to manage by reason of their restlessness and however unwelcome these cases may be in asylums it cannot be expected that they should be cared for by their friends or even in workhouses adequately equipped for dealing with cases of imbecility and mild insanity. These are very different from the quiet, harmless cases referred to above whose care does not require the elaborate equipment of a modern asylum. It is said that the practice of disposing of these cases by sending them to asylums for the insane is increasing and in this connexion certain statistics given in the last report of the Commissioners in Lunacy are interesting. A comparison is therein made between the statistics of the population at the census of 1891 and that of 1901 and those of institutions for the insane for England and Wales. The figures are grouped under two heads, as affecting persons who had attained the ages of 20 to 54 years in one group and those aged 55 years and upwards in the other. The statistical facts gathered, which refer to about four-fifths of the total (known) insanity, justify the inference that, as regards those cared for in institutions, "the rate of increase in numbers, both of those in residence and those admitted, when contrasted with the total number of persons living at each term, has been much smaller amongst those of ages 20 to 54 than amongst those above the latter age. Indeed, if comparison with the actual rate of increase of the population in the ten years be permissible, the rate of increase of the ratio of the insane to population is seen to be below the foregoing rate in the younger group but above it in the older."

It may be contended that the consignment of their relatives to asylums on an increasing scale argues a greater confidence in these institutions on the part of the public; but there is another and less agreeable explanation to be found in the possible diminution of filial respect and sense of duty. When we look round the wards of an asylum and note cases of quiet senile dementia, those admitted as such and those which have after long residence become such, the question arises whether, in less strenuous times, many of these would not have been cared for with solicitude and efficiency in the homes of their children. In default of home care asylums could be relieved of such cases by workhouses or by the system of boarding out in private care. The proposition said to have been brought forward at the meeting of the Metropolitan Asylums Board respecting the desirability of having one authority in London for dealing with all cases of insanity and imbecility commends itself to common sense.

SECURITY OF TENURE FOR MEDICAL OFFICERS OF HEALTH.

AMONGST the Bills which may shortly be brought before Parliament is the Public Health Bill, of which Dr. C. F. Hutchinson has charge. This is a Bill to secure to all medical officers of health and sanitary inspectors similar security in their tenure of office to that enjoyed by Poor-law medical officers and metropolitan medical officers of health—that is to say, such officers shall be removed only by, or with the consent of, the Local Government Board. Periodically there occurs some glaring example of a medical officer of health being cast adrift by the local sanitary authority, sometimes through a too conscientious observance of his duties by that officer, and sometimes from the advocacy of certain measures which it is feared will increase the rates, or which may injuriously

affect certain vested interests of his masters, the district councillors. The most recent illustration of the precarious nature of the appointments held by medical officers of health is afforded by the action of the Havant rural district council. The district of this council is a large straggling one, consisting of Hayling Island and various small villages, with an area of over 10,000 acres and a population of about 4500. The present medical officer of health, whose remuneration is the magnificent sum of £30 per annum, has held the appointment for over 26 years, during which period he has to public knowledge proved himself a capable and conscientious officer. Length of honourable service, however, has apparently few admirers among the members of the Havant rural council, for, without any reason being assigned, without any complaint being formulated, these bucolic legislators decided that the fitting reward for over a quarter of a century's faithful service was sudden dismissal. A certain furtiveness, or it may be modesty, even then characterised their action, for no intimation whatever was given to the medical officer that it was intended to dispense with his services; the first notice that this gentleman received was seeing the advertisement for a medical officer of health in the local press. There had never been any question of neglect of duty or incompetence in its performance to warrant the advertisement.

The action of the council is the more instructive inasmuch as Mr. A. Stewart Norman, the medical gentleman in question, is well known in the south of England in connexion with sanitary matters and is, in fact, at the present time President of the southern branch of the Incorporated Society of Medical Officers of Health. Further, when already holding the appointment and though busy at the same time with private practice, Mr. Norman, in order to be the better qualified to carry out his duties, devoted considerable time to the study of hygiene, and in 1893 obtained the diploma in public health at the University of Cambridge. It is with considerable pleasure that we have the satisfaction of recording that in this particular instance the action of the council in attempting to slight its medical officer has recoiled on itself, for such is the respect in which Mr. Norman is held by the public generally, and his professional brethren in particular, that no medical man in the district could be induced to send in an application; the council had, therefore, to the benefit of the district, though doubtless to its own mortification, to re-elect Mr. Norman to the post he has so well filled. Voters in rural districts are proverbially apathetic, but it will be indeed strange if those district councillors who are responsible for the recent treatment of Mr. Norman do not have the contemptibility of their action brought home to them when next applying for re-election. Although in the above instance the medical officer of health did not suffer a grave injustice, the important fact to remember is that it was not from any want of will on the part of the local sanitary authority; it was prevented solely by the loyalty of medical men in the neighbourhood. It is more than likely that had the salary attached to the appointment been a large one and had it been advertised in the medical press so as to reach a large number of medical men who were unaware of the true state of affairs numerous applications would have been received and in all probability Mr. Norman would have been dismissed.

Not once but many times has attention been drawn in THE LANCET to the urgent necessity for fresh legislation to govern the appointment of medical officers of health. That the officer who is responsible for the measures to be taken for the preservation of health and the prevention of disease should be liable to sudden and capricious dismissal is an ugly blot upon the public health administration of this country. Doubtless the reason that so unsatisfactory a state of affairs has been allowed to exist so long is ignorance on the part of the public; the latter, if ever it gives the matter a thought, seems to hold the belief that medical officers can only be dismissed with the consent of the Local Government Board—a totally erroneous idea that has probably arisen from a confusion of these appointments with those of medical officers under the Poor-law Acts. When medical officers were appointed under the Poor-law it was felt that the power of their dismissal should not be vested in boards of guardians and legislation was enacted accordingly. Strangely enough, no such protection has been afforded to medical officers of health, yet the latter are far more likely to suffer injustice than are the former. Indeed, if a medical officer does his duty in a rural district he is morally certain, sooner or later, to offend some of his councillors, with the result that he is dismissed and a more complacent officer sought.

Everyone must feel that the time has come when the perpetration of such a flagrant act of injustice as was attempted at Havant should be put beyond the power of local authorities. At Havant, it is true, beyond the slight put upon the medical officer no great harm has resulted. This, however, cannot be said of similar occurrences that have been recorded in other parts of the country where medical officers have lost their appointments solely from their refusal to sacrifice their sense of duty to their own personal aggrandisement. Leaving out of consideration altogether, moreover, the question of injustice to the medical officer there is the still stronger argument that the public can have no right to expect that the requirements of the Public Health Acts will be efficiently administered if medical officers always have to consider whether the advancement of certain needed sanitary reforms will not injuriously affect their personal relations with their council. For these reasons, therefore, both in the interest of the profession and in that of the public, the Public Health Bill of Dr. Hutchinson may be heartily commended to the earnest consideration of Members of Parliament and it is to be hoped that ere long a fundamental alteration will be effected in the very anomalous conditions under which medical officers of health now hold their appointments.

THE BELGRAVE HOSPITAL FOR CHILDREN.

A MEETING of medical men practising in the neighbourhood of the Belgrave Hospital for Children, Clapham-road, London, was held at that hospital on April 11th. The meeting was convened by the honorary medical staff of the Belgrave Hospital for Children in order to discuss certain proposals with the medical men in the district, as both the committee of management of the hospital and the medical staff were anxious that the work of the hospital should be carried on in such a manner as not to prove injurious to medical men practising in the district. The invitation to the meeting was sent out to about 150 medical men and the medical staff stated that it was their wish that only those patients should be treated at the hospital who, by reason of their poverty or the nature of the illness, were suitable subjects for hospital relief. Further, they were anxious that the hospital should be of advantage to the medical men in the district. The following gentlemen attended the meeting in response to the invitation of the medical staff: Dr. J. W. J. Oswald, Mr. H. H. Norton, Mr. A. J. McNickle, Dr. Benjamin Jones, Mr. W. E. Pain, Dr. Joseph J. C. Constable, Mr. J. C. Constable, Mr. M. S. Duke, Mr. J. G. Glasgow, and Mr. A. C. Robinson. The members of the medical staff who attended to confer with the medical men in the district were Dr. W. Ewart, Dr. E. Cautley, Mr. N. Bishop Harman, Mr. D. J. Armour, and Mr. H. Lett.

The proceedings commenced under the chairmanship of Dr. EWART with a discussion on the suggestion put forward by the medical subcommittee of the medical staff that a local medical society should be formed by the medical practitioners in the neighbourhood of the hospital. After the subject had been debated thoroughly it was agreed that the matter should be postponed until some future date when the views of the local practitioners concerned could be accurately ascertained.

In consequence of Dr. Ewart having to leave Dr. CAUTLEY took the chair and explained that the next business on the agenda paper was the subject of out-patients. It was agreed that not more than 20 new surgical cases and 20 new medical cases should be seen on each day by the medical officer in attendance. In regard to the selection of cases preference was to be given to those most seriously ill and to cases referred to the hospital by medical practitioners.

A prolonged discussion took place in regard to the management of the out-patient department and it was finally decided that out-patients living within a radius of two miles from the hospital should only be admitted, except in the case of urgent illness or accident, on the presentation of a card signed by a medical man. It was also arranged that similar cards for admittance should be issued to the Charity Organisation Society and to almoners. Dr. Cautley at this stage of the proceedings pointed out that the

medical staff were doubtful whether limitation of recommendations to medical practitioners alone would not throw an undue amount of work on the practitioners' shoulders. He observed that unless the local practitioners took up the scheme warmly it was probable that the work in the outpatient department would be too strictly limited. A scheme was put forward to arrange for a consulting department to be instituted at the hospital in order that parents might be able to bring children for a second opinion or further advice in cases where they were not able to pay the ordinary fees of consultants. The opinion of the meeting, however, was opposed to this course, as it was considered that medical men could safely rely on the courtesy of the medical staff to give them an opinion on any particular case on which information was desired.

In replying to a vote of thanks to the chairman, proposed by Mr. NORTON, Dr. CAUTLEY assured the medical practitioners present that the medical staff would be extremely pleased if the medical men of the district would form themselves into a local organisation, as it could not but result in advantage to the profession. It was understood that the result of the conference would be submitted to the committee of management of the hospital.

The proceedings then terminated.

MEDICINE AND THE LAW.

Baths at Police Stations.

THE Gloucestershire standing joint committee discussed an interesting question recently with regard to the inclusion of a bathroom to be used for prisoners in the plans for a new police station at Henbury, near Bristol. From a sanitary point of view there can be little doubt that a very large number of the persons ordinarily accommodated in such a building might be washed with advantage to themselves, to those brought in contact with them at the police court and elsewhere, and also to those who subsequently occupy the cells which they vacate. On the other hand, the vice-chairman of the committee pointed out that the rights of the police with regard to untried prisoners, if not very clearly defined, are certainly limited. He thought it likely that the proposed innovation might in practice lay the police open to charges of assault. It seems probable, indeed, that for the enforcement of a rigid rule for the bathing of all prisoners the authority of the Home Office, if not of the legislature, would be required and that such a rule would inflict unnecessary hardship in many cases, for a bath in such circumstances is hardly likely to be regarded as a luxury even by those most used to ablutions. A discretionary power, however, given to the chief officer at a police station to have some of the dirtier prisoners who come under his charge cleansed would be another matter. The clothes in such circumstances would have to be resumed but they could often be rendered less offensive without a great deal of trouble by baking. The condition of many of those who spend a night in the cells of a police station is frequently disgusting and may be dangerous to others who, although their offences are perhaps more serious, cannot justly be visited with more than the lawful penalties prescribed for their misdeeds.

Ferrous Sulphate in Beer.

Thomas Sands, described as "lately" carrying on business as a publican in Westbourne-park-road, Paddington, was fined £5 with £2 12*s.* costs at Marylebone police court recently for adding ferrous sulphate to the beer which he sold to his customers. Samples taken in December, 1904, and in February, 1905, were all found to contain the added matter complained of. For the defence an attempt was made to suggest that the adulteration was effected in order to make the beer frothy and palatable. Whether this would have been any excuse in the eyes of the magistrate had it been established may be considered doubtful. It might be suggested that any adulteration having for its object the causing of an inferior article to appear to be of good quality must be greatly to the prejudice of the customer. In the case in question, however, the prosecution pointed out that the tendency of the ferrous sulphate would be to impart an astringent quality to the beverage and that a dry throat and mouth would increase the desire of the consumer to drink. The magistrate accepted this view, which no doubt was correct, and the fine imposed marked his opinion of what, on the part of a vendor of intoxicating liquors, was an ingenious and dangerous device for increasing his trade.

Mushrooms and the Liability of Restaurant Proprietors.

The recent action brought by a lady against the proprietor of a restaurant in Regent-street, on the ground that she had been injured by eating mushrooms supplied by him to her at luncheon, will serve to remind persons in the position of the defendant of the dangers which they run and of the necessity for exercising the most scrupulous care in their own interests as well as in that of their guests. This in the case referred to the defendant was able to show that he had done. As, however, the learned judge pointed out to the jury, the action was not based upon any alleged negligence on the part of the defendant but upon the "implied warranty" which everyone in such a business gives that the food which he supplies is fit for its purpose. In the case referred to the plaintiff was ill *after* eating mushrooms, but her evidence fell a long way short of proving that she was ill *because* she had eaten them, and even had she satisfied the jury that this was the case she had still failed to show that the mushrooms to which she ascribed her symptoms were worse than those which other persons at the same time and place had eaten with impunity. The doctrine of the "implied warranty" may be a useful incentive to the caterer to exercise the greatest possible care in the carrying on of his business but it necessarily inflicts at times considerable hardship upon him. If, however, the law deems that he warrants all that he sells to be fit for human food it does not go so far as to make him guarantee that it will agree with individual stomachs.

THE KING INSTITUTE OF PREVENTIVE MEDICINE.

ONE of the most important events which have of late taken place in India has been the opening of the King Institute of Preventive Medicine at Guindy, a suburb of Madras, by His Excellency Lord Ampthill on March 11th, in the presence of a large and representative gathering. The institute owes its origin and establishment to the strenuous and unremitting labours of Lieutenant-Colonel W. G. King, I.M.S., C.I.E., Sanitary Commissioner of Madras, and it was therefore only fitting and right that it should bear his name. The advance of sanitary science has been by great strides of late years. Sanitation is at all times necessary, alike in peace and in war, and all can consequently take an interest in, and reap the advantages of, an institution of this sort which can only have the unifying effect, moreover, of combining Christians, Hindus, and Mussulmans in working together for a common object and mutual benefit.

Lord Ampthill delivered an excellent as well as, from a historical point of view, a very interesting and wise address on the occasion, in which His Excellency set forth the nature, the aims, and the objects of the institute and most deservedly extolled the labours of Colonel King and expressed the indebtedness of the Indian Government and of all classes of the native population to him for what he had accomplished. There is probably no place in the world where public health measures and institutions are more needed or are likely to be productive of greater benefit than India.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—The following prizes for the winter session 1904–05 have been awarded:—Second year students: W. B. Johnson, the William Tite scholarship, £25. Third year students: R. W. Rix, the Musgrove scholarship, £35; J. A. Clarke, College prize, £20; and H. A. H. Robson, College prize, £10. Fifth year students: C. Ll. Morgan (medicine), £10; H. T. Gray (surgery), £10; J. M. Wyatt (midwifery and diseases of women), £10; C. J. Langley (pathology), the Hadden prize, £10; H. T. Gray and L. E. C. Norbury (pharmacology), £5 each; L. E. C. Norbury (forensic medicine and insanity), £10; and G. J. Langley (public health), £10. The Mead medal and the Seymour Graves Toller prize for proficiency in practical medicine, pathology and hygiene were awarded to G. J. Langley; the Wainwright prize was awarded to H. R. Dean; and the Cheselden medal for proficiency in surgery and surgical anatomy was awarded to L. E. C. Norbury.

Looking Back.

FROM

THE LANCET, *SATURDAY*, April 14, 1827.

The most ingenious of human inventions, when compared with the animal frame, indicate, in truth, a poverty of contrivance, which cannot fail to humble the vain pretensions of man. Surely then, there are few who will not feel desirous of possessing some general knowledge, at least, on a subject possessed of so many sources of attraction. Indeed, when we take into account the active spirit of curiosity that prevails within us, we can only wonder at the apathy and indifference which many feel to be informed on such subjects. How strange should we consider it in a man who occupied a spacious and beautiful residence, if we found him wholly unacquainted with its general arrangements, the number of apartments it contained, its various divisions and subdivisions; yet we are content to occupy this clay-built tenement of ours for forty or fifty years and upwards, without knowing as much as the simple mechanical contrivance, by which we are enabled to raise our hand to our head. This perhaps has been in part owing to the natural aversion men feel to inspect the human body after life has become extinct; partly, also, to the vague unintelligible nomenclature in which this branch of knowledge has been so long enveloped, and which has been so aptly described as the pride of the anatomist, and the disgrace of his science. It should be kept in mind, however, that the examination of the human body is not indispensably requisite to enable us to understand the leading and more important functions of our frame. So far as physical organisation is concerned, however humiliating may be the reflection, man, the lord of creation, differs but little from a number of the inferior animals with which he is surrounded; the immaterial imperishable spark that dwells within him constitutes his grand and leading claim to superiority over the brute that perisheth, and entitles him to rank with a more exalted class of created beings. Hence it is proposed, in the following Lectures, to avail ourselves of this remarkable analogy in structure, and to draw our illustrations of the several elementary tissues altogether from the anatomy of the lower animals.

The observations I have just made apply to all: to you, as mechanics, the structure of the human body, owing to the many instances of curious yet simple contrivances for effecting motion which it presents, must prove peculiarly interesting, and may, perhaps, be the means of suggesting some improvements in the construction of the several branches of machinery connected with your immediate occupations. In proof of what I here assert, I may mention that Mr. Collinge, an ingenious London artist, happening one day to divide the leg of a fowl, was struck with the accuracy with which this spherical surface, which you observe here, was fitted to the cup or cavity intended for its reception, and the idea occurred to him, that a hinge constructed on similar principles might be attended with considerable advantages, as in this case the whole of the bearing would be distributed equally over the interior of the socket, and not exerted altogether on the surface, as in the common hinge. Accordingly, Mr. Collinge had hinges manufactured after this manner, and found his expectations realized to their fullest extent. They are now, I understand, much used in London, and are found particularly serviceable in windmills, the rudders of ships, park gates, and other heavy pieces of machinery. I have inquired at several of the shops in town for those ball and socket hinges, but have not been able to procure one, so that I fancy they have not as yet made their way into this country. The same ingenious artist has taken another hint from the structure of the joints of animals. Joints, you may observe, are besmeared with a tenacious slippery kind of fluid, not unlike white of egg, termed synovia, or, in common language, joint oil, a far more expressive appellation. Mr. Collinge has added to his larger hinges, particularly those intended for massy gates, a contrivance by which they are kept constantly supplied with oil, while the superfluous portion is allowed to escape by a small aperture in the bottom of the cup.[1]

[1] Excerpt from "An Introductory Lecture to a Course on the Structure and Functions of the Human Body, delivered at the Dublin Mechanics' Institution by Thomas M'Keever, M.D."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 8301 births and 4688 deaths were registered during the week ending April 8th. The annual rate of mortality in these towns, which had been 15·8, 15·9, and 15·7 per 1000 in the three preceding weeks, was 15 7 per 1000 again last week. In London the death-rate was 15·8 per 1000, while it averaged 15·6 in the 75 other large towns. The lowest death-rates in these towns were 7·4 in Hornsey, 8·5 in East Ham and in Plymouth, 9·6 in Leyton, 9·7 in King's Norton, and 10·0 in Wallasey; the highest rates were 19·5 in Burnley and in Sheffield, 20·1 in Oldham, 21·1 in Wigan, 24·2 in Hanley, and 26·1 in Merthyr Tydfil. The 4688 deaths in these towns last week included 430 which were referred to the principal infectious diseases, against 430, 494, and 483 in the three preceding weeks; of these 430 deaths, 189 resulted from measles, 111 from whooping-cough, 51 from diphtheria, 32 from diarrhœa, 26 from scarlet fever, 18 from "fever" (principally enteric), and three from small-pox. No death from any of these diseases was registered last week in Brighton, Bournemouth, Ipswich, Great Yarmouth, Plymouth, Burton-on-Trent, Walsall, Handsworth (Staffs.), Grimsby, Wallasey, Bootle, or Bury; while the highest death-rates from the principal infectious diseases were recorded in Portsmouth, Southampton, West Bromwich, Wigan, Sheffield, Middlesbrough, and Stockton on-Tees. The greatest proportional mortality from measles occurred in Portsmouth, Southampton, Reading, West Bromwich, Wigan, Bolton, Sheffield, Middlesbrough, Stockton-on-Tees, and Merthyr Tydfil; from diphtheria in Hanley; and from whooping-cough in Willesden, Tottenham, Hanley, and Tynemouth. The mortality from scarlet fever, "fever," and diarrhœa showed no marked excess in any of the large towns. One fatal case of small-pox was registered in London, one in Bradford, and one in South Shields, but none in any other of the 76 large towns. The number of small-pox patients in the Metropolitan Asylums Hospitals, which had been 20 on each of the two preceding Saturdays, had risen to 21 on Saturday, April 8th; four new cases were admitted during the week, against nine, three, and two in the three preceding weeks. The number of scarlet fever cases remaining under treatment in these hospitals and in the London Fever Hospital at the end of the week was 2086, against 2042, 2035, and 2032 at the end of the three preceding weeks; 292 new cases were admitted during the week, against 262, 274, and 254 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory organs, which had been 304, 304, and 273 in the three preceding weeks, rose again last week to 308, but were 25 below the number in the corresponding period of last year. The causes of 48, or 1·0 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Salford, Leeds, Newcastle-upon-Tyne, and in 43 other smaller towns; while the largest proportions of uncertified deaths were registered in Liverpool, Warrington, Sheffield, Rotherham, Middlesbrough, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·2, 18·3, and 16·9 per 1000 in the three preceding weeks, further fell to 16·6 per 1000 during the week ending April 8th, but was 0·9 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 11·5 in Leith and 14·0 in Edinburgh, to 17·7 in Paisley and 21·5 in Aberdeen. The 556 deaths in these towns included 28 from whooping-cough, 20 from diarrhœa, 13 from measles, five from diphtheria, five from "fever," and two from scarlet fever. In all, 73 deaths resulted from these principal infectious diseases last week, against 52, 59, and 43 in the three preceding weeks. These 73 deaths were equal to an annual rate of 2·2 per 1000, which was 0·8 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 17, 33, and 20 in the three preceding weeks, increased again last week to 28, of which 19

occurred in Glasgow, three in Paisley, and three in Greenock. The deaths from diarrhœa, which had been eight in each of the two preceding weeks, rose to 20 last week and included ten in Glasgow, four in Aberdeen, three in Edinburgh, and three in Dundee. The fatal cases of measles, which had been ten, six, and five in the three preceding weeks, rose again last week to 13, of which eight were registered in Glasgow and four in Edinburgh. The deaths from diphtheria, which had been eight, ten, and five in the three preceding weeks, were again five last week, and included two in Glasgow and two in Edinburgh. The fatal cases of "fever," which had been three, one, and four in the three preceding weeks, further rose last week to five, of which two were recorded in Glasgow and two in Aberdeen; in each of these towns one of the two deaths from "fever" was a case of typhus. The deaths referred to diseases of the respiratory organs, which had been 140, 133, and 105 in the three preceding weeks, rose again to 119 last week, but were 19 below the number in the corresponding period of last year. The causes of 15, or nearly 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·8, 22·4, and 24·9 per 1000 in the three preceding weeks, further rose to 25·5 per 1000 during the week ending April 8th. During the past four weeks the death-rate has averaged 24·2 per 1000, the rates during the same period being 15·4 in London and 16·8 in Edinburgh. The 185 deaths of persons belonging to Dublin registered during the week under notice were four in excess of the number in the preceding week, and included five which were referred to the principal infectious diseases, against eight, seven, and eight in the three preceding weeks; of these, two resulted from diarrhœa, and one each from diphtheria, from whooping-cough, and from "fever," but none from small-pox, measles, or scarlet fever. These five deaths were equal to an annual rate of 0·7 per 1000, the death-rates last week from the principal infectious diseases being 1·3 in London and 1·5 in Edinburgh. The 185 deaths in Dublin last week included 31 of children under one year of age and 57 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons exceeded the respective numbers recorded in the preceding week. Seven inquest cases and two deaths from violence were registered; and 73, or nearly two-fifths, of the deaths occurred in public institutions. The causes of 10, or more than 5 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING MARCH, 1905.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious disease it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6·0 per 1000 of the population, estimated at 4,684,794 persons in the middle of the year. In the three preceding months the rates had been 6·1, 5·8, and 5·9 per 1000 respectively. The rates were considerably below the average in Paddington, Kensington, Chelsea, the City of Westminster, and Southwark; while they showed the largest excess in Stoke Newington, Bethnal Green, Stepney, Wandsworth, Lewisham, and Woolwich. The prevalence of small-pox last month exceeded that in any other recent month; of the 25 cases notified during March, 12 belonged to Stepney, six to Camberwell, two to Hackney, and two to Greenwich. The Metropolitan Asylums hospitals contained 20 small-pox patients at the end of last month, against 17, 15, and 15 at the end of the three preceding months; the weekly admissions averaged four, against four, one, and three in the three preceding months. Scarlet fever showed a slightly increased prevalence compared with that in the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in Hampstead, Stoke Newington, Shoreditch, Bethnal Green, Wandsworth, Lewisham, and Woolwich. The number of scarlet fever patients under treatment in the Metropolitan Asylums hospitals, which had been 2349, 2067, and 1941 at the end of the three preceding months, had risen again to 1997 at the end of last month; the weekly admissions averaged 272, against 233, 209, and 231 in the three preceding months. The prevalence of diphtheria last month showed a considerable decline; the greatest proportional prevalence of this disease occurred in Stoke Newington, Hackney, Bethnal Green, Stepney, Poplar, and Woolwich. The Metropolitan Asylums hospitals contained 788 diphtheria patients at the end of last month, against 800, 836, and 837 at the end of the three preceding months; the weekly admissions averaged 98 against 99, 115, and 118 in the three preceding months. Enteric fever was slightly less prevalent than it had been during the preceding month; among the various metropolitan boroughs this disease showed the greatest proportional prevalence in Paddington, Holborn, Stepney, Lewisham, and Camberwell. The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 237, 134, and 105 at the end of the three preceding months, had declined to 68 at the end of March; the weekly admissions averaged 11, against 22, 17, and 13 in the three preceding months. Erysipelas was proportionally most prevalent in Shoreditch, Bethnal Green, Stepney, Camberwell, and Deptford. The 25 cases of puerperal fever notified during the month included four in Fulham, three in Islington, and two each in Hammersmith, Shoreditch, Battersea, and Wandsworth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the several boroughs in which the deceased persons had previously resided. During the five weeks ending April 1st the deaths of 6977 persons belonging to London were registered, equal to an annual rate of 15·5 per 1000; in the three preceding months the rates had been 18·4, 17·0, and 16·4 per 1000. The lowest death-rates in London last month were 9·9 in Hampstead, 12·2 in Woolwich, 12·9 in Wandsworth, 13·6 in Hammersmith, and 13·8 in the City of Westminster and in Stoke Newington; the highest rates were 18·0 in Stepney, 18·1 in Holborn, 18·4 in St. Marylebone, 19·1 in Shoreditch, 19·2 in Southwark, 19·5 in the City of London, and 19·8 in Finsbury. The 6977 deaths from all causes in London last month included 532 which were referred to the principal infectious diseases; of these, two resulted from small-pox, 153 from measles, 54 from scarlet fever, 58 from diphtheria, 197 from whooping-cough, 15 from enteric fever, and 53 from diarrhœa. No death from any of these diseases was recorded last month in the City of London; among the metropolitan boroughs they caused the lowest death-rates in Paddington, the City of Westminster, Hampstead, Lambeth, Battersea, Deptford, and Woolwich; and the highest rates in Fulham, Hackney, Shoreditch, Bethnal Green, Stepney, Poplar, and Southwark. The two fatal cases of small-pox included one in Hackney and one in Stepney. The 153 deaths from measles were less than half of the corrected average number; the greatest proportional mortality from this disease occurred in Hackney, Shoreditch, Stepney, Bermondsey, Wandsworth, and Lewisham. The 54 fatal cases of scarlet fever were eight in excess of the average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Chelsea, Hackney, Finsbury, Shoreditch, Stepney, and Bermondsey. The deaths from diphtheria numbered 58 last month, against a corrected average of 167; the highest death-rates from this disease were recorded in Bethnal Green, Stepney, Poplar, Southwark, and Woolwich. The 197 fatal cases of whooping-cough were 94 fewer than the corrected average number; this disease showed the highest proportional fatality in Kensington, Fulham, Chelsea, Hackney, Shoreditch, Bethnal Green, Southwark, and Camberwell. The 15 deaths from "fever" showed a decline of 21 from the average number in the corresponding periods of the ten preceding years and included three in Stepney and two each in Kensington, St. Marylebone, and Islington. The 53 fatal cases of diarrhœa were 15 below the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Fulham, the City of Westminster, Bethnal Green, Stepney, and Poplar. In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases was more than 45 per cent. below the average.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 116 per 1000. The lowest rates of infant

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING MARCH, 1905.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1905.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.													
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
LONDON	**4,694,794**	**25**	**1515**	**618**	**1**	**87**	**—**	**25**	**413**	**—**	**2694**	**6·0**	**2**	**153**	**54**	**58**	**197**	**—**	**15**	**—**	**53**	**532**	**1·2**	**6577**	**15·5**	**116**
West Districts.																										
Paddington	147,935	—	29	8	—	6	—	1	8	—	52	3·7	—	2	—	—	7	—	—	—	2	11	0·8	206	14·5	127
Kensington	180,083	—	38	12	—	2	—	—	16	—	68	3·9	—	—	1	1	12	—	2	—	3	19	1·1	285	16·5	187
Hammersmith	119,037	—	38	17	—	2	—	2	9	—	68	6·0	—	3	1	2	7	—	—	—	1	14	1·2	155	13·6	125
Fulham	157,210	—	38	21	—	2	—	4	16	—	81	5·4	—	3	2	3	15	—	—	—	3	26	1·7	212	14·1	140
Chelsea	74,498	—	10	5	—	2	—	1	4	—	22	3·1	—	—	2	—	6	—	—	—	1	9	1·3	120	16·8	103
City of Westminster	175,606	—	38	7	—	4	—	1	11	—	61	3·6	—	2	—	—	3	—	—	—	4	9	0·5	232	13·8	95
North Districts.																										
St. Marylebone	129,453	—	21	18	—	3	—	—	11	—	53	4·3	—	4	2	2	4	—	2	—	—	14	1·1	229	18·4	89
Hampstead	88,142	—	35	12	—	1	—	1	7	—	56	6·6	—	2	—	—	3	—	—	—	1	6	0·7	84	9·9	101
St. Pancras	236,183	1	63	19	—	5	—	—	22	—	110	4·9	—	8	1	1	8	—	—	—	2	20	0·9	351	15·5	121
Islington	342,994	—	100	33	—	4	—	3	17	—	157	4·8	—	7	4	4	11	—	2	—	2	30	0·9	470	14·3	96
Stoke Newington	52,828	—	23	11	—	—	—	1	4	—	39	7·7	—	2	—	—	3	—	—	—	—	5	1·0	70	13·8	82
Hackney	228,479	2	69	49	1	3	—	1	23	—	148	6·8	1	17	5	2	14	—	—	—	1	40	1·8	339	15·5	114
Central Districts.																										
Holborn	56,481	—	18	3	—	3	—	—	2	—	26	4·8	—	1	1	—	2	—	1	—	—	5	0·9	98	18·1	107
Finsbury	98,207	—	33	13	—	—	—	1	5	—	52	5·5	—	2	3	1	4	—	—	—	1	11	1·2	186	19·8	118
City of London	22,425	—	7	1	—	1	—	—	2	—	11	5·1	—	—	—	—	—	—	—	—	—	—	—	42	19·5	143
East Districts.																										
Shoreditch	116,565	—	48	18	—	—	—	2	15	—	83	7·4	—	7	4	1	9	—	—	—	2	23	2·1	214	19·1	152
Bethnal Green	130,401	1	53	34	—	2	—	—	19	—	109	8·7	—	4	2	3	8	—	—	—	3	20	1·6	223	17·8	115
Stepney	305,466	12	108	81	—	11	—	—	34	—	246	8·4	1	17	6	6	7	—	3	—	6	46	1·6	528	18·0	129
Poplar	170,280	—	41	41	—	—	—	—	12	—	94	5·8	—	9	1	6	7	—	—	—	4	27	1·7	276	16·9	116
South Districts.																										
Southwark	208,523	—	23	28	—	3	—	—	19	—	73	3·7	—	4	2	5	18	—	—	—	2	31	1·6	384	19·2	135
Bermondsey	129,006	—	50	9	—	2	—	1	12	—	74	6·0	—	8	3	2	2	—	—	—	1	16	1·3	222	17·9	140
Lambeth	313,045	—	82	15	—	2	—	1	25	—	125	4·2	—	1	3	3	7	—	1	—	3	18	0·6	435	14·5	87
Battersea	177,532	—	63	18	—	1	—	2	15	—	99	5·8	—	6	1	1	5	—	—	—	1	14	0·8	244	14·3	75
Wandsworth	265,392	—	141	44	—	7	—	2	18	—	212	8·3	—	17	5	3	8	—	1	—	2	36	1·4	328	12·9	113
Camberwell	271,240	6	98	30	—	8	—	1	38	—	181	7·0	—	10	2	5	17	—	1	—	4	39	1·5	375	14·4	118
Deptford	114,495	—	40	14	—	2	—	—	17	—	73	6·6	—	3	—	2	3	—	1	—	—	9	0·8	177	16·1	128
Greenwich	103,493	2	24	12	—	2	—	—	10	—	50	5·0	—	2	1	1	5	—	—	—	1	10	1·0	141	14·2	98
Lewisham	144,420	—	93	21	—	8	—	—	13	—	135	9·7	—	12	1	1	1	—	1	—	2	18	1·3	204	14·7	111
Woolwich	125,372	—	90	34	—	1	—	—	8	—	133	11·1	—	—	1	3	1	—	—	—	1	6	0·5	147	12·2	104
Port of London	—	1	1	—	—	—	—	—	1	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

mortality were recorded in the City of Westminster, St. Marylebone, Islington, Stoke Newington, Camberwell, Battersea, and Greenwich; and the highest rates in Kensington, Fulham, the City of London, Shoreditch, and Bermondsey.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: H. J. Hadden to the *London*; A. F. Harper to the *Renown*; A. G. Wildey to the *Ramillies*; E. H. Hodnet de Courtmacsherry to the *Powerful*; and W. E. Home to the *Hannibal*. Staff Surgeons: A. H. H. Vizard to Bermuda for service in Ireland Island and Dockyard; P. V. Jackson to the *Latona*; E. T. Meagher to continue to be lent to the *Ramillies*; S. H. Birt to the *Indefatigable*; and F. Bradshaw to the *Edgar*. Surgeons: H. A. Kellond-Knight to the *London*; E. Arkwright to the *Sentinel* on commissioning; P. W. MacVean to the *Flora*; A. F. Mackay to the *Ringdove* on commissioning; N. B. V. Jacob to the *Sapphire II.*, lent temporarily; G. Moir to the *Research*, lent for summer season; A. R. Davidson to the *Triton*, lent for summer season; S. H. Facey to the *Albion*; N. H. Harris to the *Pembroke*: and F. H. Nimmo to Haslar Hospital.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel J. Hoysted, Army Medical Staff (retired), is to proceed to Derby for duty. Lieutenant C. R. Tichborne, R.A.M.C. (Militia), assumes medical charge of troops and Non-Dieted Hospital, Kildare. Major F. W. Begbie is appointed Secretary and Registrar of the Military Hospital at Millbank. Captain A. M. MacLaughlin is posted to Belfast for duty.

Lieutenant-Colonel P. J. Dempsey is placed on retired pay (dated March 28th, 1905). Captain W. J. P. Adye-Curran, from half-pay, to be Captain (dated March 23rd, 1905). Lieutenant J. A. Longley resigns his commission (dated April 8th, 1905).

THE COURSE OF INSTRUCTION AT HASLAR.

The course of instruction for Surgeons R.N. at Haslar Hospital terminated on April 6th, when the prizes were distributed by Vice-Admiral Sir Charles Drury, K.C.S.I., Second Sea Lord, who was accompanied by the Commander-in-Chief at Portsmouth and by the Medical Director-General of the Navy. Luncheon was served in the officers' mess prior to the distribution of the prizes and Sir Charles Drury gave a short address to the newly commissioned surgeons. The gold medal was gained by Surgeon L. F. Cope (St. George's Hospital), the microscope by Surgeon L. C. Hunt (St. George's Hospital), and the silver medal and books by Surgeon H. M. Braithwaite (University of Durham). The names of the candidates with the combined marks gained at the entrance examination and at the Haslar course are subjoined.

	Marks.		Marks.
L. F. Cope	4472	F. G. Wilson	3619
F. L. de Verteuil	4362	J. McA. Holmes	3575
K. D. Bell	4321	E. D. Rutherford	3500
H. B. Hill	4267	R. Willan	3426
H. M. Braithwaite... ...	4122	A. O. Hooper	3356
D. G. Addison-Scott ...	3991	H. S. Turner	3303
F. Hernaman-Johnson...	3960	E. M. W. Hearn	3177
L. C. Hunt	3859	R. H. McGiffin...	3167
C. R. Worthington... ...	3781	D. P. MacL. Campbell ...	3160
P. M. Rivaz...	3764	S. H. Vickery	3056
J. R. A. Clark-Hall ...	3734	M. W. Haydon...	2931
H. Cooper	3666	A. J. McDiarmid	2890

THE 1ST CADET BATTALION OF THE ROYAL FUSILIERS (CITY OF LONDON REGIMENT).

Writing from the Hampstead headquarters of the 1st Cadet Battalion the Royal Fusiliers (City of London Regiment), the commanding officer, Lieutenant-Colonel Frank Sheffield, wishes to draw attention to the opening ceremony which has been fixed by the Prince of Wales, colonel-in-chief of the Royal Fusiliers, for Monday evening, May 15th. In the course of a careful preliminary inspection of these headquarters His Royal Highness was pleased to express unqualified "approval of their extent, architectural appearance, and general completeness, in which respect they are unsurpassed by any similar buildings in the metropolis." The battalion is entirely dependent upon voluntary subscriptions which may be sent to Lieutenant-Colonel Sheffield at the headquarters, Pond-street, Hampstead, N.W.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on April 11th, Sir J. Dick, K.C.B., being in the chair, the sum of £50 was distributed among the several applicants.

THE AMERICAN NURSES IN JAPAN.

The *Century Magazine* for the present month contains an article by Mrs. Anita Newcomb McGee, M.D., descriptive of what is termed an international episode afforded by the proceedings and the experience of the American corps of nurses in Japan. A special interest is lent to the paper by the light that it throws upon the nature and the working of the medical, nursing, and hospital systems in that country under the strain and the conditions of a war of unparalleled magnitude. Dr. Anita McGee took a party of well-trained American nurses to Japan in 1904 for six months' uncompensated service. They were received as guests of the Japanese nation and the object of their visit very naturally roused the sentiment and enthusiasm of the people. In the present war Hiroshima, in Western Japan, although not the seat of the Japanese Government, is the principal place of military activity. The policy of the Army Medical Department has been to establish its great base hospital there. At Hiroshima the most serious surgical work is done and, in the words of Surgeon-General Fujita, "except for the smoke and noise of battle Hiroshima is the front." The hospital consisted in October of eight divisions of different sizes with a total capacity of about 14,000 beds, or 17,000 if closely crowded. These divisions are located on what was previously vacant land in different parts of the city outskirts. The division for contagious diseases, including both typhoid fever and dysentery, is one of the smallest, with only 500 beds. The wards are one-storey wooden structures on the pavilion plan and usually for 60 or 70 beds each. For officers and critical cases certain wards are partitioned into small rooms. Several train-loads of patients leave Hiroshima daily, so that the wards are scenes of perpetual change. "The Red Cross Society of Japan is probably, all things considered, the finest organisation of the kind in the world." It has now nearly 1,000,000 members, an excellent relief organisation, and large funds. It is the ally and assistant of the medical officers and altogether subordinate to their orders. The nursing in the field and part of that on hospital ships are done by men. The training of the female nurses is good; it is military throughout and a large proportion of women undertake it primarily as an act of patriotism. One of the things which seems greatly to have struck the American nurses was the strength and endurance of these seemingly delicate and frail Japanese women. Nurses were on duty at the Hiroshima hospital for 28 hours continuously. "All through the hot summer those dear little women were in their wards from eight one morning till noon the next day, followed by a third day of eight hours, and beginning on the fourth another long period. Like all Japanese, they drank hot tea at any hour but they took scarcely 15 minutes to eat their light cold meals. They thought nothing of carrying a man on their backs, just as in childhood they had probably carried their little brothers." As regards obedience to discipline, cheerfulness, habitual kindness, willingness to serve, and an unfailing urbanity in little things, the female Japanese nurses are not easily to be surpassed.

THE WAR IN THE FAR EAST.

The great interest felt everywhere in the present stupendous war has been altogether translated for the time being from the land to the sea and as to what is to be the outcome of the next naval operations which may apparently occur at any moment and may be attended with momentous results. Should the Japanese fleet be defeated so as to entail the loss on its part of command of the sea it is obvious that the whole complexion of the war will be altered, while, on the other hand, if Admiral Rojdestvensky's fleet be defeated it may, and not improbably will, lead to an end being made to this terrible war by terms being proffered on the part of Russia in order to secure peace—a result devoutly to be wished in the cause of humanity. Meanwhile there is still some uncertainty about the Russian fleet and as regards the whereabouts of the Japanese fleet the secret is being well kept, absolutely nothing being allowed to leak out on the part of the Japanese authorities. We have for the first time since the battle of Mukden some trustworthy news as to the belligerent armies in Manchuria. These are in touch and intelligence

may be any day received of the fighting being renewed in that direction. According to a telegram from Moscow sent by the special correspondent of the *Standard* an unfortunate Red Cross scandal has just occurred there. Two princes of the Urussoff family and two other nobles were to have been tried there on charges of fraud in connexion with the Russian Red Cross Society. None of them, however, entered an appearance. One of the princes was absent on duty in the Far East while the other had fled abroad and their two alleged accomplices were nowhere to be found.

Probably a unique case, says the *Novosti*, is that of M. Heiman of Riga, who has three sons serving in the active army as surgeons. They were called up singly from the youngest to the eldest in February, May, and October last year respectively. The second has been decorated for the part which he took in the fight at Liaoyang.

The Yaroslav hospital detachment lost all its material, valued at £400, at the battle of Mukden, whilst the losses of the Kharkoff detachment at the same battle are said to be £1500.

It has been decided that from July 1st next, until further orders, all staff, medical, and departmental officers serving at home or abroad (except India) shall, in common with regimental officers, have the option of drawing their pay either through the agents or the local accountant or paymaster. Servant allowance will continue to be drawn in the same manner as the pay, but field allowance and allowances in lieu of forage, stabling, lodging, and fuel and light will always be drawn through the local accountant.

Surgeon-General A. H. Keogh, C.B., Director-General A.M.S., has intimated to general officers commanding that it is considered desirable that matrons or acting matrons should keep a permanent record of all the sisters and staff nurses of the Nursing Service and also of the Army Nursing Service Reserve members who are serving under them in each hospital.

Defective colour vision, it has been decided, shall no longer disqualify candidates for commissions in the army.

Correspondence.

"Audi alteram partem."

THE TEACHING OF HYGIENE IN ELEMENTARY SCHOOLS.

To the Editors of THE LANCET.

SIRS,—In a leading article in THE LANCET of April 8th, p. 939, you deal with the present much-debated subject of a syllabus defining the scope of the teaching of hygiene in elementary schools. As one who attended the recent School Hygiene Conference, which met under the auspices of the Royal Sanitary Institute, I was impressed with the circumstance that opinions differed widely upon this subject, according as to whether the speaker was a physiologist, a public health official, or an educationist, and, generally speaking, an unduly high standard of knowledge was favoured. It appears to me that in the whole scheme of teaching hygiene in elementary schools the fact must never be lost sight of that, *from the broadest point of view*, it is only simple and essential matters that require to be taught and that any scheme aiming at more than this will certainly fail to realise the best results. Moreover, if the subject is to be gone into as deeply as many advocate it would demand a greater share of the already congested school time table than educationists are prepared to bestow. Of course, the distinction must be drawn between what the teacher should know and what the scholar should be taught, but in drawing up a detailed syllabus for the latter we have only to ask ourselves at every step, Is it essential that he or she should know this? Is it knowledge which he or she can apply? To take an example, Is it necessary to teach the scholar the structure of the lungs and the mechanism of respiration in order to impress upon him the importance of fresh air, or is it sufficient to base the teaching on the results of common experience and the simplest possible expression of a few physiological facts which serve to explain these? As to ventilation, Is it necessary to touch upon the physics of this difficult problem or will it suffice to indicate (and illustrate) the simple and practical devices by which the best results may be obtained in living and sleeping rooms? Surely it is not necessary (although the Board of Education would appear to suggest that it is) that while making reference to the vital necessity of the oxygen in the air the issue in the child's mind should be confused by any allusion to the injurious properties of oxygen *under artificial conditions*. The facts which it is necessary to teach and which would (if generally practised) reduce the sum of preventable misery, suffering, and death very considerably could be incorporated in a short syllabus and the physiology necessary to explain them and to make their importance realised can always be adequately set out in simple non-technical language. The scientific principles involved may be very largely left to the students who attend evening continuation classes, for many of them hardly appeal to the intelligence of the child under 14 years of age.

In short, the instruction must deal with the most easily understood, the cheapest, and the most practicable means of translating sanitary precepts into practice. The conduct demanded of the scholar will constitute the hygienic training necessary, and the school buildings and fittings should, so far as possible, be made to illustrate all necessary hygienic observances. But the training in the observation of sanitary precepts is a form of moral training, and if the home influences are antagonistic to those of the school the home influence will often prevail. Therefore, a dirty and neglected child indicates the necessity of attempting to do something to improve the parents. Simple and elementary as the teaching must be, its range must necessarily be a comprehensive one and every female child should be taught the elementary facts of suitable selection of food, cooking, and infant rearing. The Board of Education is certainly well advised in proceeding with caution in the matter of deciding as to what is to be taught; and when this is settled a greater difficulty awaits them in deciding *how the information may best be conveyed*, on a scheme suitably graduated to the ages and the capacities of the scholars. The value of *the right sort of teaching* cannot be over-estimated. The ignorance among the poor of personal and domestic hygiene, including, of course, infantile rearing, is responsible in no small measure for their high preventable mortality, their inferior physique, their intemperance, and their poverty. The possession of citizens of good physical and moral stamina is the most valuable and abiding of all national assets, and for this the nation is very largely dependent upon what the educational influences of school life are made to be.

I am, Sirs, yours faithfully,

HENRY KENWOOD.

Public Health Department, University College, W.C.,
April 11th, 1905.

SHOCK AND COLLAPSE.

To the Editors of THE LANCET.

SIRS,—Mr. P. Lockhart Mummery has produced no evidence in support of his assertions that increased atmospheric pressure is of value in the treatment of shock and that this increased pressure can alter the distribution of blood in the vessels. Until he does so these assertions remain pure hypotheses, unsupported by facts and contrary to ordinary physical principles. Mr. Mummery is astonished at the way in which the vaso-motor system is able to cope with variations of external pressure. (Will he explain how it does so?) To me it seems that the vaso-motor system has nothing to do with it but that the phenomena are to be explained by purely physical principles.

The vascular system consists of a closed system of elastic tubes containing an incompressible liquid. The blood pressure is maintained by the force exerted by the heart and the resistance to the blood flow in the vessels. Alterations in the blood pressure can be produced by alterations in the force or rhythm of the heart beat (which we can leave out of account in the present discussion) or by alterations in the peripheral resistance. *Local* increase in the peripheral resistance, as by localised external pressure, will produce an alteration in the distribution of the blood by driving the blood into that part of the system which is not subjected to pressure and, in consequence, the vessels in this part of the circulation will dilate and their tension and therefore the blood pressure will be increased. On the other hand, a *general* increase in the external pressure cannot produce any alteration in the distribution of the blood because the pressure will be exerted equally at all parts of

the system. It remains, therefore, to prove that the increased atmospheric pressure does reach to all parts of the vascular system. This proof follows readily on ordinary hydrostatic principles. The majority of the tissues of the body are in a semi-fluid condition and all the tissues are permeated by an incompressible fluid which fills all the tissue spaces and lymphatic channels. Through this fluid the external atmospheric pressure is transmitted as easily as through the blood and any increase of external pressure is transmitted to all parts of the vascular system with equal force and therefore cannot alter the distribution of blood in the vessels. Under these conditions the absolute pressure in the blood-vessels is raised in the same proportion as the external atmospheric pressure and the relative pressure—that is, the blood pressure in the ordinary sense—remains unaltered. I am, Sirs, yours faithfully,

CHARLES POWELL WHITE.

St. Thomas's Hospital, April 10th, 1905.

LEGISLATION FOR FEMALE CLERKS.

To the Editors of THE LANCET.

SIRS,—With reference to Dr. T. E. White's letter in THE LANCET of April 8th, p. 959, ample legislative powers already exist for dealing with such cases as Dr. White describes. In the metropolis, Section 38 of the Public Health (London) Act, 1891, requires sufficient and suitable accommodation, with proper and separate accommodation for persons of each sex, to be provided in every factory, workshop, or workplace. In the provinces similar powers to require such accommodation to be provided are given by Section 22 of the Public Health Acts Amendment Act, 1890, the category of premises being, however, slightly wider than that in the Section 38 referred to above. There is no satisfactory definition of "workplace" but the decision given in Bennett *v.* Harding (1900), 2 Q.B. 397, is wide enough to meet all requirements. There is, I venture to think, no need for further legislation, only for more activity on the part of local authorities to put into force the powers which they already possess.—I am, Sirs, yours faithfully,

REGINALD DUDFIELD, M.A., M.B., D.P.H. Cantab.

Paddington, W., April 10th, 1905.

"AMAAS."

To the Editors of THE LANCET.

SIRS,—Had Dr. George Turner taken the trouble to read with care my paper on Amaas, which appeared in THE LANCET of May 7th, 1904, he would have noticed that, far from contending amaas to be a distinct disease from small-pox, the view succinctly stated in the concluding sentence of my paper is to the effect that amaas is considered to be variola modified by some undetermined factor or factors. This view I shall consider myself justified in retaining until the experimental evidence adduced of the susceptibility of amaas patients to vaccinia is successfully refuted. In the 14 subjects of amaas vaccinated three to five weeks (not an indefinite number of years) after the outbreak of the eruption all 14 cases proved susceptible to vaccinia.

I am, Sirs, yours faithfully,

King's College, April 10th, 1905. W. E. DE KORTÉ.

THE WEST INDIES: THEIR VALUE AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—The West India Islands, especially Jamaica, have lately come much to the front as a health resort for British and American tourists. I have recently returned from a five months' sojourn in the latter colony and, having had very exceptional opportunities for visiting almost every part of the island, was particularly struck by the fact that the districts of Jamaica, affording most advantages to invalids both in climate and beauty of surroundings, were almost neglected. Visitors to the island flock to the fine hotels in and near Kingston, Port Antonio, and Mandeville. The climate of the latter, reached by an easy railway journey from Kingston and a few miles' drive, is all that could be desired. To the invalids, however, the bustle and conventionality attendant on a busy season were sources of vexation and disappointment. Yet had they known it, within easy reach of them, for Jamaica is a small island, were districts of matchless beauty, of superb and equable climate, and, above all, of simple and inexpensive living.

After close observation and with experience of Egypt and the Canaries I believe that for cases of neurasthenia, chronic rheumatism, and pulmonary disease, no climate could excel that of the uplands of Jamaica. To those to whom a sea voyage is a trial the island can now be reached in ease and comfort by the Direct Line steamers in ten days or a little over. The practitioner who recommends Jamaica would do well to advise his patient not to stay too long in Kingston but to go up country at once. To my mind the beautiful stretch of mountainous country that lies between Mandeville (accessible by railway) and Brown's Town (easily approached from the sea) possesses the most perfect climate in Jamaica. Between the townships of Christiana and Ulster Springs the mountains rise to a height of 3000 feet with good roads. The days are never too hot for a fair amount of walking or riding exercise; the nights are delightfully cool and pleasant; the trellis work with which nearly every window is fitted makes it impossible for the phthisical patient to shut out the air even if he cared to do so. He can drink spring water instead of the tank water so prevalent in Jamaica and he will find the natives a most courteous and law-abiding people. Mosquitoes are rare, in the higher districts practically unknown. All kinds of delicious fruits are at his service at a merely nominal price; indeed, the orange and mango can be had for the picking. The exquisite charm of the scenery, the purity of the mountain atmosphere, the outdoor life—for he need go no further than the verandah if he does not care to stir abroad—the absence of bustle, the increased appetite, and the sound and refreshing sleep soon produce a very marked change in the patient. To the well-to-do of either sex I believe Jamaica affords unrivalled opportunities for repose of mind and body. The climate and life are ideal for convalescents and in phthisis, in the many cases which I have been able to authenticate, the results were remarkably good. In the latter the beneficent results were especially marked in those who had abandoned the tourist track in favour of the unconventional life of the *real Jamaica* in the uplands. The boarding houses, and there are far too few of them, are clean, comfortable, well-served, and not expensive. But why is there no sanatorium in that beautiful and health-giving district?

The conscientious practitioner, who remembers the humble circumstances of his patient before ordering him abroad, will do well to think of Jamaica. For females who have to earn a living there are, unfortunately, few opportunities there. But for the male, whatever his previous training may have been, who is willing to spend a few months in learning the rudiments of agriculture or stock-raising, the island offers a good living. A pleasant life it is, too, compared with the rough and tumble of South Africa. He will not be long a "stranger" there. The Jamaicans are models of kindness and hospitality.

I am, Sirs, yours faithfully,

April 10th, 1905. A. A. BARCLAY, M.B. Glasg.

THE TREATMENT OF EMPYEMA.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 1st Mr. Rickman J. Godlee quite rightly makes a protest against the surgical treatment of empyema, as laid down by Dr. S. West in your issue of March 25th, but he has not called attention to these statements in Dr. West's paper: "It sometimes happens that a case of empyema comes under observation in such a condition that immediate operation seems risky and then paracentesis will give relief and gain time till the patient is in a better state to stand the incision. ..... Of course, if paracentesis be performed for empyema the aspirator must be employed."

I presume that the "risk" referred to is the danger of the anæsthetic on account of the presence of a large amount of fluid within the chest mechanically impeding respiration and the heart's action; as well as the weakness of the cardiac muscle from the general toxæmic condition of the patient. In cases such as these I have not found paracentesis by means of an aspirator satisfactory. No doubt the removal of the pus will for a short time relieve the mechanical pressure, but it will not prevent further absorption of toxic products, and I have also found that very soon there occurs a fresh throwing-out of fluid from the walls of the empyema and thus the mechanical pressure

is reproduced. The treatment for these "risky" cases is, in my opinion, to put in a trocar and cannula, with strict antiseptic precautions and under local anæsthesia, and to leave the cannula in to drain off the pus quietly and slowly.[1] This not only relieves the mechanical pressure but also arrests the absorption of toxic products. After from four to ten days, the cannula not having been removed, according to the severity of the case the improvement in the patient's condition will allow an anæsthetic to be administered with impunity. Part of a rib may then be excised, the lymph removed, and the cavity thoroughly explored and drained in the manner recommended by Mr. Godlee.

I am, Sirs, yours faithfully,

Queen Anne-street, W., April 3rd, 1905. WILLIAM TURNER.

THE EPIDEMIC OF PLAGUE IN INDIA.

To the Editors of THE LANCET.

SIRS,—I have read your leading article "Plague in India" with interest and appreciation and having had some years' experience on plague duty share in your misgivings. The Indian Plague Commission advanced our knowledge but little and in my opinion this was owing to the fact that a great part of its time was expended in hearing the evidence of witnesses. This naturally involved much repetition; written reports would have saved time and probably have been clearer. The time of the scientific members would have been more usefully devoted to *personal* bacteriological and experimental research.

It is essential that the India Office should thoroughly appreciate the importance of the inquiry being conducted on the spot by the most able bacteriologists procurable and that no expense must be spared. The inquiry should aim at affording definite answers to the following: 1. The life-history of the bacillus pestis. 2. How does the human body become infected? 3. How and where does the bacillus pestis exist during the intervals between epidemics? 4. How is it that the most careful and thorough disinfection fails in some instances to prevent the recurrence (after an uncertain interval) of the disease on the same premises? 5. The relationship between epidemics of plague in rats and in human beings. It is a matter of general knowledge that human cases may follow on the death of rats from plague, but how the two are connected is not certainly known. 6. The manufacture and action of Haffkine's prophylactic and Yersin's serum. The prophylactic, according to my experience undoubtedly efficacious, should be standardised in order that the desired protection can be obtained without excessive inconvenience to the subject. Yersin's serum, so successful in the laboratory, has in the hospitals of South Africa given most unsatisfactory results.

I am, Sirs, yours faithfully,

Hatch End, March 29th, 1905. W. D. BETENSON.

THE AGE INCIDENCE OF CANCER.

To the Editors of THE LANCET.

SIRS,—Dr. E. F. Bashford, in his timely and very interesting address, published in THE LANCET of April 1st, p. 837, insists that "all hypotheses in explanation of the origin and nature of cancer break down, not only in not explaining how growth is maintained but also before the problem of the peculiar age incidence of the disease." The following theory will, I believe, explain the two difficulties mentioned, as well as many other salient features in the history of malignant and other new growths.

We start from Virchow's famous dictum, "Omnis cellula a cellulâ," every cancer consisting of a mass of cells starts from a previous cell, and is really only the result of a deviation from the normal mode of growth. It will be well therefore to bring back to mind very briefly the essential phenomena attending the division of a cell—whether animal or vegetable—and the normal growth of the resulting daughter cells. Consider then a cell just about to divide. When the energy or forces in the nucleus reach a certain point the nucleus divides into two parts which separate, but are joined by fine strands of nuclear protoplasm. Near the middle of these strands is deposited the new cell wall elaborated by the nuclei from the materials contained in the lymph or sap as the case may be. It is evident that the nuclei spend a given amount of energy in the construction of this new cell wall. The two daughter cells in their turn may grow and divide, the nuclei always spending a normal amount of energy in constructing the new cell wall. Such very briefly are the essential features of normal growth. There has been no mention of early and minute changes in the nuclei—karyokinesis; it suffices here to consider only the play of energy in the cell.

We will now inquire to see if we can suggest any deviation from the above normal process which might lead to continuous abnormal growth. Assume then that we have a cell with a normal nucleus just about to divide, but assume also that some of the materials supplied for the elaboration of the new cell wall about to be formed are wanting in quality or quantity. The nuclei divide but spend less energy than is normally the case in constructing what may now be designated a poor quality cell wall. The (daughter) nuclei are thus left *overcharged with energy*. These overcharged nuclei will, it is safe to assume, divide much more quickly, i.e., after a much shorter interval of time than would be the case with normal nuclei. When they divide their daughter nuclei in turn form poor quality cell walls and so the swift and apparently unlimited growth must continue.

Such is the theory I am bringing forward to attempt to explain the incidents in the life-history of new growths and to be very brief I will mention only a few of the more salient incidents. The two difficulties mentioned by Dr. Bashford are age incidence and limitless growth. Taking the latter difficulty first the theory shows that the only limit to the growth of the cells is the complete withdrawal of nourishment—i.e., the death of the host—or the reappearance of the normal materials for elaborating a normal cell wall. This is excessively unlikely to happen, as once the growth has started the drain on the host is established, making it almost impossible for the latter ever again to supply normal nourishment. As to age incidence, we may put the matter in another way and ask, at what time in the life of an organism is the nourishment supplied to the parts likely to show deterioration? We must remember, at the same time, that the deterioration must be slight, otherwise the nuclei would suffer and there would be no growth at all. The answer to the question is, evidently just past the prime of life. For up to this time the materials supplied for growth will in general be normal. Further, cancer should be unlikely to occur long after the prime of life, for then the nuclei also are on the wane. This theory then suggests that cancer should start just after the prime of life in any animal and, further, that cancer should be less liable to start in the *very* old. Such organs as the mamma and uterus in the parous may be said to pass their prime immediately they begin their first involution, and on this theory cancer ought to occur earlier in such organs than in other parts of the body.

Any interference with the lymph or blood-supply to a part in so far as it altered the nourishment for the elaboration of new cell walls might thus start a cancer in the part. Trauma may cause such interference. Again, the cell wall being, on the theory, of lower quality than normal, a cancer ought to degenerate quickly and show degeneration products peculiar to itself. And again, this cell with its low quality cell wall and nucleus overcharged with energy—in other words, a cancer cell—is a menace to the host as long as nourishment can reach it. The change in the character of the cell wall and the quick rate of growth may account either separately or jointly for the frequent detachment of cells from one another. If such a cell be carried to another part of the body it is supplied with the same nourishment and the chances are greatly in favour of its growth in its new position—i.e., the establishment of secondary growths. In an individual of the same species, provided the cell is transplanted at a corresponding period in life, the cell ought to grow into a cancer in many cases, while if transplanted into the system of individuals of different species it ought to die, unless, indeed, the lymphs of the two hosts were chemically identical.

Finally, as a cancer cell is one with nucleus overcharged with energy it is impossible to fail to see that it is in a similar state to the cell which results from the union of the male element with the ovum and we will not be surprised to notice that in many respects cells in a cancer show resemblance to the fertilised ovum. This latter cell has a nucleus representing the combined energy of the male and female nuclei. The great point of resemblance between the fertilised ovum and a cancer cell is, of course, their characteristic tendency to divide—i.e., to growth.

Enough has been written to show that many important

[1] See THE LANCET, April 12th, 1902, p. 1044.

clinical features of new growth can be deduced from a simple consideration of the play and balance of energy in a cell. The theory, tentative, like most theories of cancer, may be found interesting if only because it shows how many points in the course of a cancer can be explained without recourse to a specific cause. I have refrained from confining the theory to malignant new growth alone, for it is evident that other tumours would come within its scope, from the most malignant to those of very slow growth. The only index to the rate of growth is the difference between the normal and new cell wall in composition. The greater this difference the swifter is the growth or the greater the malignancy.

I am, Sirs, yours faithfully,

R. E. ROBERTS, M.B., B.Sc. Lond.

Crosskeys, Monmouthshire, April 3rd, 1905.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 1st Dr. E. F. Bashford, in a very interesting paper on the Growth of Cancer, lays a good deal of stress on the unsolved problem of the age incidence of the disease. For some time it has seemed to me that a factor in the production of new growths has been a rise in blood pressure. One could give several instances where tumour formation, both benignant and malign, has been preceded by high arterial tension.

Two cases will suffice to make clear my meaning. A woman, now aged 41 years, has been under my care for the last nine years. During that period I have seen her frequently for headaches of an intense nature, due apparently to high arterial tension. Drugs seem useless but leeches to the temple give some relief. She has also had to wear a pessary for prolapse of the uterus following her last confinement 11 years ago. The patient has seen several physicians and gynæcologists but without relief to the headaches. 18 months ago she developed a fibroid of the uterus which now reaches within an inch of the umbilicus. It is worth noting that before the tumour appeared the heart showed signs of dilatation. Recently the blood pressure by Hill and Barnard's sphygmometer registered 180 millimetres of mercury but such records are of small value unless its relation to the force of the heart-beat is considered. For example, with a very feeble heart-beat the tension might be relatively high, while the sphygmometer might register it as apparently low.

The other case was in a man, aged 72 years. Eight years ago when I saw him for a minor ailment one noticed that his blood pressure was very high and the arterial tone increased. A year later he came with a cancer of the lip, the exciting cause being a clay pipe. The growth was examined microscopically after removal and was certainly malignant. There has been no recurrence, though the blood pressure is still high, and the only change in habits is that the man has given up smoking.

In both these cases there were high arterial tension and also irritation, the one from changes in the uterus following the prolapse and the other from the clay pipe. Since blood pressure presumably tends to rise in all vertebrates in later life it may account for the age incidence in cancer. It is to the general practitioner that one must look to confirm or to refute this view, for, like myself, he has the opportunity to follow cases over long periods of time. As to why increased blood pressure might cause aberrant growth must be somewhat speculative; but if, as some maintain, high arterial tension is due to changes in the density of the blood plasma this would cause a change in osmotic pressure. A change in the normal osmotic pressure as a factor in the production of aberrant growth can be well seen in the eggs of the frog or sea urchin.

I am, Sirs, yours faithfully,

Formby, April 3rd, 1905. ARTHUR C. WILSON.

THE TREATMENT OF HÆMORRHOIDS BY THE HIGH-FREQUENCY CURRENT.

To the Editors of THE LANCET.

SIRS,—As we have recently heard a great deal of the value of high-frequency treatment for internal piles I thought it might prove of value to record the following case.

On Dec. 24th, 1904, I was consulted by a gentleman, aged 51 years, suffering from internal hæmorrhoids, which were then inflamed and prolapsed. On Jan. 4th, 1905, the inflammatory condition having subsided, he was, at my request, examined by a surgeon on the staff of one of our special hospitals for rectal diseases so that the exact condition of the parts might be ascertained before high-frequency treatment was commenced, which I was desirous he should try, as the case, to my mind, was a typical one for testing the value of this method and the patient was naturally anxious to avoid an operation. On Jan. 5th high-frequency treatment was commenced by a surgeon on the staff of the electrical department of one of our London hospitals, with the understanding that he might continue the treatment as long as he thought necessary and applied by whatever method he thought fit. On March 29th, the patient having had 32 applications, the surgeon said he could do no further good, even if he had done him any good at all. On March 31st he was again examined by the surgeon on the staff of the special hospital who had seen him on Jan. 4th. The surgeon informed us that the condition was practically the same as on that occasion and that an operation was as necessary now as it was before the high-frequency treatment had been commenced.—I am, Sirs, yours faithfully,

Wimpole-street, W., April 3rd, 1905. GEO. STEELE-PERKINS.

ABOUT AUTOGENOUS INSTITUTES.

To the Editors of THE LANCET.

SIRS,—I have noticed in the advertising columns of the medical journals lately statements of analysis issued from sources bearing the titles of "Institute of Hygiene," "Institute of Bacteriology," &c. I humbly submit that it is necessary at once sternly to reprobate this practice—namely, that a fortuitous congeries of individuals should elect to call themselves an "Institute" of Bacteriology or the like and issue certificates of commendation to impress the public or the profession. So far as regards the "Institute of Hygiene" I believe that the gentlemen composing it are of the highest probity and of the greatest eminence. Some of them I know, personally and by repute, and I have the greatest respect for their attainments. But it is obvious that those very excellences which may guard this particular "institute" from adverse criticism will be availed of by less scrupulous folk to foist other "institutes" into being. If we are to tolerate these what is to prevent any half dozen chemists from joining with a couple of medical men and announcing themselves as an "Institute of Pharmacology," which will be prepared to examine and to report (for a fee) on any pharmaceutical preparation? Or a few needy medical men combining with an architect or two and constituting an "Institute of House Hygiene," prepared to bless or to blame every article used in the house? The possibilities of prospective fraud are too awful to contemplate.

I am, Sirs, yours faithfully,

J. C. MCWALTER, M.D. Brux., M.A., D.P.H.

April 9th, 1905.

DANGERS TO THE OPERATOR FROM THE X RAYS.

To the Editors of THE LANCET.

SIRS,—An annotation in THE LANCET of April 8th, p. 945, on the above subject begins: "Though the injuries inflicted on the patient in the use of the x rays have been repeatedly recorded little attention has been directed to the dangers to the operator." Such a statement is, in my opinion, rather too sweeping, as many hospitals and also private workers take precautions to protect the operator from the influence of extraneous rays. At the London Hospital shields made of thick glass containing a high percentage of lead are used. The rays are allowed to fall only where they are wanted and the rule is to take radiographs in all cases, the screen being used only where the peculiar circumstances of the case render it necessary. Under the arrangements there it is considered to be practically impossible for the operator to become seriously damaged and if it does happen it will be due to his own carelessness in not availing himself of the means provided for his safety. That operators in the London Hospital have suffered severe injury in the past is only too true, but nothing fresh has happened since the introduction of the x ray shields over 12 months ago. This is a matter for congratulation considering that we have six sets of apparatus in constant use.

I am, Sirs, yours faithfully,

REGINALD MORTON,

Medical Officer in Charge of the Electrical Department,

April 11th, 1905. London Hospital.

CHOLERA, PLAGUE, AND OTHER DISEASES IN THE NEAR EAST.

(FROM THE BRITISH DELEGATE TO THE OTTOMAN BOARD OF HEALTH.)

SINCE the date of my last letter, which appeared in THE LANCET of March 4th, p. 604, no case of cholera has been reported from any part of the Turkish Empire. It is hoped, therefore, that the epidemic is now extinguished. Reports are still coming in with details of the outbreaks in various places, outbreaks which have already been mentioned in my earlier letters and which fortunately have now little more than an academic interest. During the epidemic in the town of Van there appears to have been a considerable mortality among the troops stationed there and a smaller mortality among the general population. Several villages in the neighbourhood were also invaded by the disease. A large number of villages in the neighbourhood of Deir-Zor, on the Euphrates, in the Aleppo vilayet, were also the scenes of outbreaks of more or less severity, but here also the epidemic seems to be over. In December it was rumoured that the disease was prevalent among the nomad Arabs who winter their flocks in the province of Deir-Zor. The presence of cholera at Bitlis has never been reported, but from information recently received it appears that there was an extraordinarily high mortality there among recruits in the latter months of last year and among the Armenian population (and, it is added, presumably among the Kurds also) the mortality rose to double the average. A still higher mortality is said to have prevailed at Mush but up to the present no definite information is to hand to show that either here or at Bitlis the raised mortality was due to cholera.

The outbreak in Persia has also greatly diminished but it is doubtful whether it has yet completely disappeared. The following is a summary of the latest reports received by the Board of Health here from its representative in Tehran, which bring the history of the epidemic down to March 7th. The Customs authorities had reported on Jan. 18th that no case of cholera had occurred in Shuster or Dizful for the preceding 15 days but at Kermanshah during the first week of that month there had been an unusual mortality from a disease accompanied with diarrhœa and vomiting, particularly among children. Cases of cholera were still occurring at Kasr-i-Shirin, near the Turkish frontier, but the disease had apparently disappeared from the Mazanderan province and no case had been seen at Meshed-i-sar since Dec. 15th. Cases had recently been observed at Kumesheh and Abadeh on the road between Ispahan and Shiraz.

Another report dated Feb. 1st stated (in contradiction to the information given in an earlier report and quoted in my last letter) that the weather in Persia this winter has been of exceptional severity. Snow had fallen to a depth of from two to three metres and the thermometer had sunk as low as -17° Réaumur (6½° below zero, Fahrenheit). This is said to be the lowest temperature recorded for 30 years. Cholera had at this date recently made its appearance at Birdjend where it was causing from 15 to 21 deaths daily. A third report, dated Feb. 8th, quoted from information received in December last from the south of Persia, according to which all that part of the country and the shores of the Persian Gulf were at that time in a satisfactory state in respect of epidemic disease. Cholera had disappeared from Mohamera in the first half of December, but in the last week of that month it had broken out at Jask, against which port a quarantine of four days, including the voyage, had been imposed by the local sanitary authorities. Reports from Tabriz, dated Jan. 15th, stated that cholera had completely disappeared from there. The Customs authorities of Kermanshah announced on Feb. 1st that cholera had apparently become endemic in Kasr-i-Shirin and its neighbourhood, especially among the Djafs, Mahmudis, and other Turkish tribes wintering there. On Feb. 6th it was reported from Khaf that the total mortality from cholera in that town and the surrounding villages had been not less than 700 persons. Cholera had disappeared from among the mining population at Nishapur where the disease broke out in the first week in January and where as many as 150 deaths had occurred. On March 1st it was stated that a few cases were still occurring at Kum and Birdjend; and finally, on March 7th the Turkish sanitary representative at Kermanshah reported that all northern and western provinces of Persia, as also the towns of Kazvin, Hamadan, and Tehran, were free from cholera; that the disease was still present at Kum; and that information was lacking as to its existence or behaviour in the southern provinces.

The reports quoted above make mention of the presence of other diseases in many parts of Persia. At Senneh (? Sehna) small-pox was seriously prevalent in January; it had caused there over 200 deaths in a short period and it was spreading to other parts of Kurdistan. The same disease was also epidemic at Nehavend, Burujird, and Tehran. In February it was also active at Tabriz, Kengaver, and Senneh. It is noteworthy that small-pox inoculation is still practised in these Persian towns, but no precautions are taken as to cleanliness or asepsis in pricking the skin of the unfortunate children who are subjected to the process; and the result is that about 50 per cent. of those inoculated die either from the disease itself or from blood poisoning. Typhus fever is mentioned in several of these reports, but it is not clear whether petechial typhus fever or enteric fever is to be understoood by this term. It has been reported from Kengaver, Nehavend, Burujird, Tabriz, and Senneh. Enteric fever and other intestinal disorders were very prevalent in Tehran in January. Diphtheria was present in Kengaver and Tabriz in the same month.

In Russian territory the cholera epidemic has almost completely died out. Between Jan. 16th and 23rd[1] only six cases and four deaths were reported from all parts of the country (one fatal case at the Alexandropol railway station, in the Erivan government, and five cases with three deaths at Tsaritsyn); between Jan. 31st and Feb. 10th only two cases of the disease were reported, one at Baku and one in the Uralsk province; between Feb. 17th and 24th only a single case occurred—at Balakhani, near Baku; and finally between Feb. 25th and March 4th no case of the disease was reported from any part of the Russian Empire.

The outbreak of pneumonic plague among the Kirghiz and Cossack population in the Uralsk province came to an end on Jan. 8th in the Bukeëf Horde and on Jan. 16th in the Gurief district of the province. The serious outbreak of anthrax ("Siberian ulcer") in the Viatka government, reported in my last letter, has to a great extent subsided. In the week ending Jan. 24th the number of fresh cases observed was 11; between Jan. 31st and Feb. 10th there were 20 (bringing the total from the beginning to 252); from the 10th to the 17th, 32 cases; from the 17th to the 24th, 19 cases and four deaths; and from Feb. 25th to March 3rd only six cases.

Some interesting details of this outbreak have recently been made known in a paper communicated to the Saratof Physico-Medical Society by Dr. Vigura and Dr. Konstansof. The outbreak began about Dec. 7th and by Jan. 6th it had caused 420 deaths. Not a single case recovered. The first case occurred in a Kirghiz settlement, close to the northern shores of the Caspian Sea. Nothing can be ascertained as to the source of infection, if for no other reason because the whole of the population of the infected settlement have died from the disease. The funeral ceremonies ("*pominki*" or wake) were attended by Khirghiz and Cossacks who spread the infection to the surrounding settlements. Saraitchik was the first Cossack settlement attacked and the disease spread to such an extent that an area of 300 square versts (about 120 square miles) was soon infected. A description is given of the precautions taken by the medical and other members of the staff who were sent to deal with the outbreak, and it is stated that while only two "feldschers" and none of the soldiers who followed these precautions contracted the disease, all the voluntary assistants (who did not take the precautions) caught the disease and died.

A severe epidemic of typhus exanthematicus has been recently prevailing in the town of Vladimir. It began in December last and assumed serious proportions in January. Between Dec. 18th and Jan. 24th as many as 115 cases of the disease had been recorded. Between Jan. 30th and Feb. 10th there were 30 fresh cases; for the next week the figures are lacking; finally, between Feb. 18th and 24th 14 cases were reported.

The outbreak of plague at Aden, mentioned in my last letter but one,[2] reached its highest point in the week ending

[1] All the dates mentioned are New Style dates.
[2] THE LANCET, Jan. 28th, 1905, p. 261.

Feb. 15th, when 374 cases and 342 deaths were recorded. The returns since have been as follows:—

	Cases.	Deaths.
Week ending Feb. 25th	269	200
,, ,, March 4th	174	160
,, ,, ,, 11th	123	115
,, ,, ,, 18th	59	53
,, ,, ,, 25th	41	32

Constantinople, April 3rd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Crossley Sanatorium.

AT the annual meeting of the friends and supporters of the Manchester Hospital for Consumption which was held at the town hall on March 31st Mr. Crossley stated that at the moment of the meeting the first 12 patients were on their way to the sanatorium in Delamere Forest. The formal opening will take place in July and it is hoped that the King will perform the ceremony. The sanatorium contains 95 beds and has been built at a cost of £80,000, if not more, and is now handed over, fully furnished and ready for use, to the Hospital for Consumption. It is a munificent gift on the part of Mr. Crossley who sets an example of philanthropic liberality that others of our rich men might follow. It is calculated that a yearly income of £6000 will be required. There is an endowment fund which now amounts to about £57,000 and provides an income of £1800. In his speech at the annual meeting Mr. Crossley said that a further sum of £4200 is required annually "in order that the increased accommodation provided may be fully utilised by the many poor patients in Manchester and the neighbourhood who are now waiting for admission." He made a strong appeal to "people of means" to help in the work. It would be deplorable if the splendid accommodation at the sanatorium and at the hospital at Bowdon could not be fully used for lack of annual income.

Infectious Disease and Elementary Schools.

In his annual report Mr. F. McDougall, the medical officer of health of Runcorn, says that during last year there were 303 cases of infectious disease notified, an increase of 118 cases over the previous year. He drew attention to the part played by schools in spreading scarlet fever, of which there were 153 cases. Some children went to school in an infected condition and possibly also some mild cases were not notified. He says that "the attempt to drive back to school children who had been away sick should be done with extreme caution" and that the education authority should require a clean bill of health before a child is readmitted to school. Financial reasons, in addition to zeal for education, are likely to lead to a too early return. The medical officer of Dukinfield thinks that the scarlet fever was not conveyed there by water or milk but that the scarlet fever germ lives and thrives in the district and is readily conveyed by infection.

Small-pox.

Here in the north small-pox is far too prevalent and in view of what is known of its causation and prevention it is allowable to say disgracefully prevalent. A somewhat serious outbreak is reported from Bradford. It is stated that about a fortnight ago a wool-sorter died after eating fish and chipped potatoes. There was an inquest and the verdict was "Death from ptomaine poisoning." On the face of it this does not seem to have any necessary connexion with small-pox. But from the house he occupied and from the next thoroughfare eight cases of the disease were removed. It is also reported that the person who laid out the man's body after the post-mortem examination for the inquest has died suddenly. The medical officer will make a full report to the health committee as is certainly desirable. To-day's report is that three fresh cases have been notified at Bradford. In Oldham last month there was a prosecution that failed apparently because the letter of the law is of more importance than the protection of the people from small-pox. A collier was summoned for not notifying cases of small-pox, he and his wife and a son suffering from it. The defence was that he had no idea it was small-pox. The presiding magistrate said that he did not believe him but the magistrate's clerk struck in with the information that "there are doctors who cannot tell small-pox," and warned the magistrates (very kindly) that they must not convict a man unless he is proved to be guilty, saying "you have no evidence of knowledge at all," and that on the evidence they could not convict. The bench were unanimous in their opinion that the man knew that he was concealing small-pox and were exceedingly sorry that they were not able to mark their sense of the danger to the community of that sort of thing upon a man whom they believed to be guilty. It would no doubt be wrong to attribute to the clerk any wish to aid in the spread of small-pox, but so acute a person would by a few well-directed questions have been able to test the truth or falsity of the plea of ignorance. Burnley has suffered rather severely and is not yet free from the disease, and it is stated that at this date there are eight cases in the Newcastle Town Moor Hospital. Nor is Halifax free from the disease, six cases being now in hospital, while towards the end of March a death from the disease took place at the Ainsworth Small-pox Hospital, the patient, who had not been vaccinated since infancy, having come from Bury. About the same time the mayor of Stalybridge and Mr. F. J. Roberts-Dudley were asked to grant a certificate of exemption from vaccination, but the latter declined, so other magistrates were waited for, one of whom agreed with the mayor to sign the certificate. The former regretted that he and Mr. Roberts-Dudley did not agree on the matter and received an answer that should help those who are so ready to give exemption certificates to understand the responsibility which they incur. "I could not sign such a certificate. If I did and that child caught the small-pox and died I should consider that I had signed its death warrant." At Accrington, too, there has been a serious epidemic which has created somewhat of a scare. Last week 16, if not more, cases were taken to hospital, among them an antivaccinationist and his four children—all unvaccinated. Several more cases have been reported from Heywood. At Preston a case occurred a short time since which is instructive as showing what some people will do to conceal the fact that they have small-pox. An inspector found that a woman was suffering from the complaint. She admitted that she had been ill five weeks and had hidden when an inspector had previously called. In consequence of her conduct ten persons were attacked. This distributor of the disease was fined 1*s.* and costs—a penalty that will no doubt strike terror in such offenders. This is an unsatisfactory state of things. One would like to see it dealt with by a practical people, which we cannot claim to be, like the Japanese.

The Mersey and Irwell Committee.

At the last meeting of the Mersey and Irwell joint committee there was some discussion as to the appointment of chemical adviser, which position has been held by Sir Henry Roscoe since the formation of the committee 15 years ago. The question had been referred to the chemical subcommittee which reported that without considerably increased expenditure the services of a chemical adviser, whose position and opinion as a man of science would have weight with local authorities, could not be obtained if he were entirely excluded from private practice. But as the joint committee desired that there should be closer touch between the chemical adviser and the committee and its work, it was recommended that Mr. Scudder, chief chemical assistant, should be appointed in succession to Sir Henry Roscoe at a salary of £725 per annum, inclusive of travelling expenses, &c., on condition that "neither he nor any partner of his shall advise or act in connexion with any matter relating to sewage or trade effluents within the Mersey and Irwell or Ribble watersheds." It was felt by many of the committee that Sir Henry Roscoe was not being treated "with the consideration due to his long and able service," and in the end it was decided to ask him to retain the office for another year. The results of the examination of 36 samples of sewage effluents from the works of local authorities showed 19 good, 13 fair, two unsatisfactory, and two bad. This is one of the best results received and, as a member said, showed that something was being done to improve the rivers under their control. The supply of water for trade and domestic purposes is so difficult a matter that in view of the apparently diminishing rainfall all sources of supply should be considered. At Cleckheaton the public baths are supplied by water pumped up from the old coal-workings and after filtration it is said to be "of a

beautiful transparency and blue rather than yellow in tone." The cost is about 9*s.* per 50,000 gallons. It is possible, too, that trade effluents may be more utilised than at present. Mr. A. M. Fowler, C.E., of Manchester, says that about 36,000,000 gallons of effluent water a day flowed into the Ship Canal and that he was recently told by Mr. Gilbert Fowler, the analytical chemist, that the effluent water was now quite up to the standard of the Irwell and Mersey rivers committee. Now, he said, "if that was so, that effluent water was practically as pure as some of the Thames water supplies and some drinking supplies in various parts of the country." It is doubtful if this statement will rouse the enthusiasm of the water drinkers of London, however gratifying it may be to members of the Mersey and Irwell committee.

April 11th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Meeting of the Royal Sanitary Institute at Bristol.

THERE will be no general congress in connexion with the Royal Sanitary Institute this year. A conference upon school hygiene, together with a small exhibition, was held in London in February and the council of the institute has arranged a series of provincial meetings during the year. One such meeting has already been held at Nottingham and others are to be held in Liverpool and Birmingham. The city of Bristol was chosen for a meeting on April 8th when the subject of isolation hospitals was considered. In opening the discussion Dr. D. S. Davies, medical officer of health of the city, dealt first of all with the necessity for isolation hospitals and said that it was an axiom that the temporary seclusion of a person suffering from a communicable fever which came to an end in a short period should succeed in preventing any definite spread of the disease in question provided the following essential conditions were fulfilled—namely, (1) that the patient had not handed on his infection to any other person before his seclusion commenced; (2) that the patient had left behind no infected material, or if he had that it had been rendered sterile; (3) that the patient was kept perfectly secluded through the whole of his illness and convalescence from direct or indirect communication of his disease to others; and (4) that the patient had perfectly recovered before he was cleansed and discharged from seclusion. Failure in any one of these essential conditions might wreck the preventive success of isolation but it would not affect the value of isolation as a principle. Dr. Davies then spoke of the diseases which were specially isolated in Bristol, these being small-pox, typhoid fever, scarlet fever, and diphtheria, and he emphasised the importance in the case of the two last of seeking for "missed" cases. He proposed the following motions which were seconded by Dr. J. Howard-Jones and carried unanimously:—

That the provision of hospital isolation accommodation for large centres of population is imperative, and that one bed per 1000 of the population is a good working minimum.

That the opposition to such provision is based on a lack of appreciation of the essential conditions that contribute to the success of isolation.

Mr. T. H. Yabbicom, the city engineer, gave an interesting account of the Bristol isolation hospitals, from which it appears that there was a small-pox hospital with 53 beds in temporary wooden buildings and eight beds in permanent wards and a permanent hospital situated about four miles from the city for the isolation of diseases other than small-pox. This hospital, which is built of brick, can accommodate 135 patients. The pavilions are built on the Local Government Board plan and include four one-storey buildings and one of two storeys. There are also four observation wards. The total number of beds, including those in the temporary buildings, available for the isolation of infectious diseases in Bristol is thus 196. The population of the city is 358,000; it is not surprising, therefore, that various speakers should have pointed out how inadequate this number was to meet the needs of a city such as Bristol. Mr. Herbert Jones, Dr. J. Middleton Martin, and Mr. J. Tubb-Thomas emphasised the importance of reducing the cost of building if sanitary authorities are to erect hospitals more generally.

A County Medical Officer of Health for Somerset.

In spite of considerable opposition, as mentioned in THE LANCET of March 18th, p. 751, the Somerset county council decided on April 4th to appoint a medical officer of health. The terms of the appointment are that he shall not devote the whole of his time to the duties of the office and shall be paid a salary of £150 annually with a fee of five guineas daily when engaged upon making special investigations on behalf of the council, such fees not to exceed £100 in any one year. It is probable that at the end of this year the administration of the Midwives Act will be placed in the hands of the medical officer of health.

Shabby Treatment of a Medical Officer of Health.

The necessity for giving security of tenure to medical officers of health has been once more illustrated in the treatment which has been experienced by Dr. Francis T. Bond at the hands of the Chipping Sodbury rural district council. Dr. Bond has been medical officer of health of the district for 32 years at an annual salary of £115. In October, 1904, the Barton Regis district was broken up, most of it being added to the city of Bristol and three parishes with a population of 4600 being added to the Chipping Sodbury rural district. The medical officer of health of Barton Regis having recently died the Chipping Sodbury council asked Dr. Bond to undertake the supervision of the added parishes but without any extra remuneration. This Dr. Bond very properly refused to do and after an appeal to the Local Government Board he was given an increased salary of £33 per annum. His term of office will expire in May and instead of reappointing him the council has advertised for an officer at a salary of £120 yearly. The Local Government Board has mildly protested and in doing so has pointed out that the fact of Dr. Bond residing away from the district is no disadvantage and that it is a distinct advantage to be able to secure an officer with special qualifications for the post. It appears to be thought that the salary paid by the council is above the average of those paid in other rural districts. This, however, is not so but rather the reverse.

West Wales Sanatorium.

The foundation stone of the West Wales Sanatorium at Alltymynydd (two and a half miles from Llanybyther station) will be laid on April 26th by H.R.H. Princess Christian of Schleswig-Holstein, accompanied by her daughter the Princess Victoria. The band of the Carmarthenshire Militia will be in attendance and a concert of Welsh national music will be given at Highmead by permission of the Lord Lieutenant of Cardiganshire and Mrs. Davies-Evans. Tickets for the concert (10*s.*, 5*s.*, and 2*s.* 6*d.*) and a limited number of platform tickets at one guinea may be obtained from the Secretary, Sanatorium Concert, Llanybyther, Carmarthenshire.

Archæology in Somerset.

At the meeting of the Somerset Archæological Society held at Taunton Castle on April 6th a valuable collection of archæological, ethnographical, and geological specimens was presented to the Taunton Museum by Mr. Hugh Norris, L.R.C.P., L.R.C.S. Edin., of South Petherton. The curator of the museum (Mr. St. George Gray) gave an interesting account of the collection and alluded to the extreme rarities which it contains. After the gift had been suitably acknowledged by the President, a hearty vote of thanks was awarded to Mr. Norris. This was replied to by his nephew, Dr. R. H. Walter, as owing to his failing health Mr. Norris could not be present. Subsequently Professor Lloyd Morgan, principal of University College, Bristol, delivered an address on the educational value of museums.

Ebbw Vale Colliery Surgeons.

For many years the relations between the colliery surgeons and the employés of the Ebbw Vale Steel, Iron, and Coal Co. were all that could be desired, but the introduction a few years ago of an entirely different system to that which formerly prevailed has made the conditions of practice not only onerous to the surgeon but unsatisfactory to the workmen and to their families. As long ago as 1880 Mr. J. W. Davies was appointed by the doctor's fund committee of the works as the workmen's surgeon. He was paid on the poundage system, 2*d.* in the pound being deducted from the men's wages at the company's offices on behalf of the committee and paid over to him periodically. He paid all the expenses of the practice, including the payment of such assistants as were necessary. Some years later an arrangement was made so that the workmen in this and the adjoining districts could be attended by any surgeon irrespectively

of the locality in which he lived and the stoppages out of the men's wages were credited accordingly. In 1903 five divisions were formed, to each of which a chief surgeon was appointed (Mr. Davies being one) at a salary of £500 annually, the committee paying the salaries of assistants, the surgery expenses, and the cost of all drugs. The assistants were appointed and controlled by the committee but the chief surgeon was responsible for the carrying on of the work. The chief surgeons were not debarred from private practice or from holding public appointments but each was restricted to practise in his own district, with the result that the managers and chief works' officials protested that they had no choice as to who should be their private medical attendants and they accordingly appointed a surgeon of their own at a salary of £500 per annum, with permission to undertake unrestricted private practice. At the end of 1904 a still further restriction was sought to be imposed by the workmen's committee and the chief surgeons received notice to give up all private practice, the object apparently being to compel the tradespeople and other residents not employed in the works to subscribe to the doctor's fund. Mr. Davies then resigned his position as colliery surgeon but continued in private practice and to hold his public appointments of medical officer of health of the Ebbw Vale urban district and Poor-law medical officer and public vaccinator. At the end of last month a further notice was given by the committee to the chief surgeons to give up all private practice and all public appointments, or in the alternative to consent to a reduction in their salaries equal to the amount earned in this way. Owing to the death of Dr. A. Keith Campbell the committee is now seeking the services of a chief surgeon to take his place and it behoves all those who apply for the position to make quite sure of the conditions under which it is proposed to make the appointment. The Monmouthshire division of the British Medical Association is actively concerning itself with the dispute.

April 10th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Sanitation in the Nineteenth Century.

AT a meeting of the Royal Philosophical Society of Glasgow held recently Dr. A. K. Chalmers, medical officer of health, delivered a lecture on the Development of Sanitation during the Nineteenth Century. During this period, he said, disease had come to be regarded not only as a misfortune to the individual but also as a factor in the national welfare. Although we had added considerably to our knowledge of the causes of disease, we had probably gained more by calling into operation forces that were social and political rather than medical. Dr. Chalmers thought that advance might be made in the direction of devising some method of supervision which would bring the many functions of local administration into coördinated action. To illustrate this he drew attention to the fact that within the municipal area of Glasgow there are for sanitary purposes 25 subdistricts corresponding to the whole of Glasgow school board area and portions of five others (Govan, Springbury, Maryhill, Cathcart, and Eastwood), and to no fewer than five Poor-law parishes (Glasgow, Govan, Eastwood, Cathcart, and Rutherglen), none of which was wholly included; also police divisions and registration districts were not comparable with one another or with any of the divisions mentioned above. Should some method be devised of coördinating those different forms of local administration they might gain a considerable amount of useful knowledge as regards the relation of pauperism to insanity, of neglected school children to both, of crime to both poverty and insanitation, and of insanity to the prevalence of particular diseases. In addition this method of coöperation might enable the various departments to arrange the expenditure in such a way as to be distributed more equally over several years and on that account it would appeal to the ratepayer.

The Marine Biological Association of the West of Scotland.

Dr. James F. Gemmill presided at the annual meeting of the Marine Biological Association of the West of Scotland which has its station at Millport. The report records another year of very successful work and the completion of the large extension of the station, thanks to the generosity of Mr. James Coats, jun. From the corporation of Glasgow for two years a grant of £100 had been received and this has enabled the association to establish a reserve account and also to carry forward to next year a balance of £8 12*s.* 6*d.* The visitors to the Robertson museum for the year numbered 6946 and the teachers' classes were well attended. The programme for 1905 includes a connected course of three or four years' progressive work for students of all grades.

The Open-air Treatment of Tuberculosis.

A meeting of subscribers to the proposed sanatorium for consumptives in Ayrshire was held to discuss the advisability of proceeding with the proposal. The chairman stated that over £12,000 had been subscribed to the building fund, that building plans had been prepared, and that a site had been secured at Glen Afton, New Cumnock. The committee thought that as other sanatoriums erected for the working classes had not been so successful as had been anticipated the subscribers should have an opportunity of deciding whether the plans were to be proceeded with or not. Dr. W. Frew of Kilmarnock proposed that they should proceed with the building and on a show of hands this was carried by a large majority. As regards the upkeep of the institution after erection it was expected that patients or their friends would contribute a little and it was hoped that parish councils and benefit societies would see that it was to their interest to support an institution of this nature.

Cruelty to Children.

During the month of March the Glasgow committee of the National Society for the Prevention of Cruelty to Children investigated 146 cases of reported cruelty involving the welfare of 432 children. The average income of the families was 24*s.* 3*d.* per week but in most instances the father was so lazy or drunken that he contributed nothing to the family upkeep. During the month 722 meals have been given, 28 children have been clothed, and 62 children have been admitted at the children's shelter.

April 11th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Teaching of Sanitary Science in Dublin.

THERE is a strong movement in Dublin which has for its object to induce the Department of Agriculture and Technical Instruction for Ireland to form a public health museum as an aid to the spread of the knowledge of hygiene. Many public bodies have passed resolutions in its favour—the public health committee of the corporation, the Dublin Sanitary Association, the Dublin branch of the Association for the Prevention of Tuberculosis, the Royal Institute of Architects, &c. It is thought that if a teaching department in public health was founded in connexion with the new College of Science, the foundation stone of which was laid two years ago by the King, the subject of sanitation would obtain a better basis in this city. Professor Antony Roche recently delivered a very successful course of lectures to sanitary inspectors in connexion with the department.

Irish Medical Association.

The now famous report of Surgeon-General G. J. H. Evatt is still the chief topic of interest amongst medical men in Ireland. The following letter from him was published in the daily journals of April 4th:—

SIR,—The annual meeting of the Irish Medical Association will take place during the ensuing summer at Killarney. I wish to suggest that it seems desirable that so important a gathering of Irish medical men should not devote themselves solely to questions of pay, organisation, and worldly betterment, but that some scientific and technical work should be done. I suggest a discussion on the causes of the pulmonary consumption that so gravely affects the Irish people; further, that some steps be taken to form a representative Sanitary National Council of Irish doctors; and, lastly, that some consideration of the serious lunacy question in Ireland is desirable. It seems to me a pity that the scientific side of Irish medical life, which the Association was formed to develop amongst other things, should, so far as the I.M.A. is concerned, have for many years dropped into abeyance. The time seems now ripe for its revival.

Yours, &c.,
GEORGE J. H. EVATT.

Junior United Service Club, London, April, 1905.

Surgeon-General Evatt does not seem to be aware that his recent crusade resembled that of "Peter the Hermit" and that the Irish Medical Association when it meets at Killarney during the summer—if it meets at all—will have

enough to do in settling its own dissensions. It will certainly have no time on that occasion to cultivate the cool atmosphere of science.

Rainfall in March.

March in Ireland was a wet month with none of the proverbial dust. Rain fell in the neighbourhood of Belfast on 29 days to the amount of 3·92 inches, giving a total of 9·14 inches for this year. The average rainfall in March is 2·93 inches.

The Treatment of Consumptives in Belfast.

The public health committee of the corporation of the city of Belfast has decided that the present time is inopportune for the council to embark on a comprehensive scheme for the treatment of consumptives involving not only a large capital outlay but an annual expenditure which would of necessity considerably increase the ratepayers' burdens. The council is shortly to discuss the question of adopting some modified plan.

Salicylic Acid in Ginger Wine.

At Moville sessions, co. Derry, several people were summoned for selling ginger wine adulterated with salicylic acid. Evidence that this drug as a preservative was dangerous and also that as a preservative in small doses to constitute a temperance drink it did no harm having been given, the magistrates unanimously decided to dismiss the cases.

The Water-supply of Belfast.

The chairman of the Belfast water board at a meeting on April 6th pointed out that although the rainfall at the several works had been slightly below the average yearly quantity all demands during the coming summer months would be supplied as at the present time the reservoirs contained over 200 days' supply of water. During the past season when in many cities in the kingdom an intermittent or short supply for certain hours daily had had to be resorted to owing to the threatened want of water, due largely to the inefficient rainfall, over the entire city area of Belfast, and even in the areas beyond the city supplied by the commissioners, water had been distributed and maintained under high pressure without any interruption whatever.

Belfast District Lunatic Asylum.

At a meeting of committee held on April 10th the medical superintendent reported that in the financial year just closed the gross expenditure had been reduced by £1702 13*s.* 2*d.* as compared with the previous 12 months though the numbers maintained had increased by 27.

April 11th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Scopolamine as an Anæsthetic.

AT the meeting of the Surgical Society held on March 29th M. Terrier related the case of a woman who suffered from unilateral pyonephritis together with an extremely sensitive bladder. M. Terrier tried in vain to ascertain the condition of the urine coming from the other kidney by the use of a separator but neither that of Luys nor that of Cathelin could be borne for more than a few minutes on account of the acute pain which their introduction produced. M. Terrier then thought of trying scopolamine anæsthesia and one injection produced a profound sleep during which all that was necessary in the way of introducing the separator and leaving it in place was successfully carried out. On awaking the patient declared that she had not undergone any operation.

Pulsating Arterial Tumours of the Parotid Region.

At the same meeting of the Surgical Society M. Tuffier discussed the treatment of the above-mentioned tumours. He reminded his hearers that the facial nerve generally crossed the field of development of the tumour and was a serious obstacle to its ablation. He said that other methods of treatment were necessary and cited three cases in support of his argument. The first was in a child, aged two years, in whom four sittings for electropuncture completed a cure. The second was that of a young woman, aged 18 years, who was afflicted with a nævus extending throughout nearly the whole of the region supplied by the external carotid artery and also with a small tumour of the parotid region, in which tumour there was a souffle but no thrill. Pressure on the external carotid artery caused the disappearance of the souffle. Electropuncture having proved useless, M. Tuffier decided to tie the artery and to obliterate the tumour. The artery was exposed and the ligature was passed underneath. Having assured himself that tightening the ligature stopped the souffle M. Tuffier left it in place without tying it. He then encircled the tumour with the ring-handle of a key which compressed the periphery and injected into it six drops of Pianza's solution. The ligature was then tightened and the patient has been perfectly well for the whole of the one year since the operation. The third patient had an erectile tumour in which were present both souffle and thrill and in addition epileptiform attacks had occurred upon more than one occasion. M. Tuffier performed an operation similar to that practised in the last case and the patient has remained well since the operation which was performed two months ago. M. Tuffier concluded by saying that his results showed that injection of the tumour should accompany ligature of the artery seeing that the latter procedure was by itself inefficacious.

Dust on the Roads.

Dust is every day figuring more largely in questions of hygiene. Not only is it harmful to the respiratory passages but it is to a marked degree a disseminator of microbes. The researches of M. Miquel have shown that epidemic diseases are most prevalent in Paris at that season of the year in which dust is most troublesome and, moreover, the routes frequented by motor cars have become absolutely uninhabitable, especially in the Midi. At the meeting of the Academy of Medicine held on March 28th M. Josias read an account of some researches which he had undertaken into the relative value of the various methods in use for the prevention of dust. None appeared quite satisfactory. Tar has marked antiseptic effects, for at a distance of ten centimetres above a tarred road there are found two-thirds less microbes than in the case of a road not so treated. This condition, however, only lasts for a few hours after the tarring has taken place. Moreover, tar is costly, it must be frequently renewed, the roadway must be good, and plenty of sunshine is needed. Finally, if the tar is applied on a gradient of about 1 in 33 horses slip on it. Petroleum and heavy oils have an action less lasting than that of tar and their antiseptic power is very feeble. Westrumite is fairly cheap but its action is uncertain in duration, probably not more than a week. Moreover, roads treated with westrumite are very liable to get covered with moulds.

The Relations between Arterial Pressure and Pulmonary Ventilation during Chloroform Anæsthesia: The Influence of Rapid Breathing upon the Occurrence of "Accidents."

M. Tissot has undertaken some researches on dogs with a view to the study of the above subjects. He states that the temporary augmentation of the arterial pressure which is produced at the beginning of the stage of excitement in chloroform narcosis is not due, at least in the majority of cases, to a peripheral vaso-constriction but to the well-known influence upon the arterial pressure of the exaggeration of the respiratory movements and to the increase in their amplitude. The succeeding rapid fall in the arterial pressure which accompanies the stage of excitement is not due to peripheral vaso-dilatation but solely to a rapid intoxication of the heart or of the cardiac centres provoked by the rapid breathing (*polypnée*). The period of excitement is not dangerous in itself but only on account of the rapid breathing which accompanies it and the rapid intoxication which results. Finally, the method of anæsthesia which consists in administering known quantities of chloroform and air in the proportion of 8 per cent. and upwards (*mélanges titrés de chloroforme à 8 pour 100 et au-dessus*) is one likely to give rise to a catastrophe (*méthode sidératrice*). M. Tissot has arrived at the two following conclusions: (1) a long period of excitement is preferable to a short one, for the former does not give rise to dangerous intoxication, and (2) the whole period of hyperpnœa is dangerous and during this stage the anæsthetic must be administered with caution.

The Antiseptic Properties of Certain Vapours.

At the meeting of the Society of Biology held on March 28th M. Trillat read an account of some researches which he had made demonstrating that the vapours disengaged by the combustion of certain substances, notably sugar, the resins, and aromatic plants, contain a notable proportion of formic aldehyde, thus testifying to the wisdom of the ancient custom of burning these substances with a

view to disinfection. The vapour produced by the combustion of two grammes of sugar in a bell jar of 12 litres capacity disinfected in 30 minutes various objects infected by the bacillus coli, the bacillus typhosus, the vibrio choleræ, the bacillus tuberculosis, and the like. The staphylococcus aureus was rendered sterile in one hour and the bacillus subtilis in four hours.

Closing of the Paris Faculty of Medicine.

In a recent article I mentioned the disturbances which have been taking place at the Faculty of Medicine in connexion with the lectures of M. Gariel and the noisy demonstrations that have been made outside his house. The students have not been appeased by the letter of apology addressed to them by the Prefect of Police and have persisted in their unruly behaviour. At M. Gariel's last lecture M. Debove, dean of the Faculty of Medicine, hoping to say something which would have a pacifying effect, entered the lecture room in company with the unpopular professor. More than 500 students who were already assembled there received M. Debove and M. Gariel with such an uproar and shouting that the two professors had to withdraw without having been able to say a word. M. Debove thereupon reported the circumstances to the University council and to M. Liard, the vice-rector. The council was in favour of closing the Faculty and M. Bienvenu-Martin, the Minister of Public Instruction, ordered it to be closed, considering that the students, instead of acting as they had done, might have sent representatives to the dean with a statement of their grievances. The school will be reopened on May 1st. The students have naturally protested, for this measure may have serious results for some of them—those, namely, who are approaching the age limit for military service. In France medical students have only one year of military service provided that they complete their medical studies before attaining the age of 25 years, failing which they must make up the other two years of military service. This closure of the school for nearly a month will delay a good many of the students by preventing them from being ready for the next examinations and may be the means of compelling them to serve the two extra years. The importance of the step that has been taken is therefore obvious. The medical students are having complaints made both in the Chamber of Deputies and in the Senate. It is to be hoped that this unfortunate incident may soon be at an end and that a way out of the difficulty may be found for the young men who are near the age limit.

April 11th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Increase of Cerebro-spinal Meningitis in New York.

THE statistics of the New York department of health up to March 31st showed that cerebro-spinal meningitis had increased and was still increasing. For the four and a half days ending noon, March 30th, from midnight, March 26th, there had been 104 deaths, as compared with 85 for the entire previous week. Statistics tabulated by weeks showed that the progression of the disease as evidenced by its death-rate was 27, 40, 48, 62, 78, 72, and 85, as against the total of 104 for the four days up to noon, March 30th. The disease is also on the increase in the neighbouring towns and considerable public apprehension has been expressed.

Hospital Finances in New York City.

The hospitals of New York are in the plight of some of your best known London hospitals financially; in fact, for some years they have been going from bad to worse in this respect. So serious is the situation considered that a public meeting has been held recently under the auspices of the New York Association for the Improvement of the Condition of the Poor in order to devise means by common action to secure more support for the hospitals and to discuss the question of hospital finance generally. The meeting was very largely attended, each hospital in the city having sent three delegates. Mr. Frank Tucker, in the course of a speech, said that the public should be educated to give more, that the hospitals should be managed more economically, and that enlarged facilities should be secured by the hospitals through inexpensive house-to-house visiting rather than through the establishment of more wards. Dr. John S. Brannan of Bellevue and allied hospitals condemned in sweeping terms the wasteful methods employed in New York hospitals. "Our American system," he said, "is all right from the point of view of training physicians and nurses, but all wrong from the point of view of hospital administration."

A Disgrace to the Medical Profession: the Radium Swindling Case.

Dr. Henry H. Kane and Dr. William H. Hall, the two medical men who were indicted through the agency of the New York County Medical Society for swindling in connexion with so-called "radium cures," have pleaded guilty and have been sentenced. Kane received four months and Hall eight months in the penitentiary. I described the case some few weeks ago in THE LANCET. Kane and Hall, it may be remembered, induced a carpenter to give them $9780 (£1956) on the pretence that they would cure him of Bright's disease by means of radium. Clemency was recommended for the men owing to the fact that they had made restitution to the carpenter of the full amount.

The Management of the Panama Canal.

A report to the Government of the United States by Dr. Charles A. L. Reed, published in the *Journal of the American Medical Association* of March 11th, has created somewhat of a sensation in the country. Dr. Reed, although not in the canal zone in a medical official capacity, had been requested by the Secretary of War to make a report of his observations relative to sanitation and the work of the sanitary department in that zone as well as in the cities of Colon and Panama. His report is an extremely severe indictment of the Isthmian Canal Commission, which was nominated by President Roosevelt on Feb. 29th of last year and is likely to be replaced by another authority within the next few days. The composition of the sanitary department is excellent and no man more fitted for the post of its head could be found than Colonel Gorgas, but Dr. Reed asserts that its work is so hampered by the civil authorities as in many respects practically to be nullified. The health department of the canal zone has been subordinated to such a degree to the commission that the former cannot perform its duties properly. The campaign against yellow fever and malaria has been thwarted, according to Dr. Reed, by the actions of the commission. A point sharply criticised by Dr. Reed is the meagre pay offered to physicians for their services in the canal zone. Colonel Gorgas had recommended that the minimum salary to be paid to medical men in the canal zone should be the same as the minimum salary in the army for contract surgeons, $1800 (£360) a year, but this rate of payment did not commend itself to the commission which thought that $50 (£10) a month were sufficient. Dr. Reed contends that so small a salary, taken in connexion with the unhealthy climate, will not attract able men and that only what he terms "cheap surgeons" will go to Panama for such a wage. Dr. Reed's critical remarks have caused a stir throughout the country. Since the publication of Dr. Reed's report, the report of Colonel Gorgas has been issued. From this report it is gathered that the sick employés of the United States Government in the canal zone during February, 1905, numbered 151, a percentage of less than 2, and the number of deaths nine, which is equivalent to a rate of 14 per 1000 per annum. The last case of yellow fever to occur in Panama was on March 18th. The total number of cases among the entire population on the isthmus during January was 19, during February 13, and during March up to date nine. The present sanitary force consists of over 1000 employés, costing over $25,000 monthly. President Roosevelt rebuked Dr. Reed for the manner in which he framed his report and made it public at the time that he did. It is clearly recognised that sanitation is the paramount consideration in the Isthmus of Panama at the present time and it is generally felt that Colonel Gorgas should have a free hand. The late Major Reed and he did such splendid work in Havana that although the situation is worse in the canal zone there would seem to be no reason that, unhampered by unnecessary restrictions, the results should not be successful there.

The First Pavilion of the New Bellevue Hospital.

At a meeting of the New York board of estimate and apportionment held on March 16th an appropriation of $850,000 (£170,000) was made, to be employed in the construction of the first pavilion of the new Bellevue Hospital. This pavilion will be erected in the grounds of the present

buildings and will have a capacity of 350 beds and when completed will relieve the congested condition of the old institution. The new structure is to be built in sections as the money is forthcoming at an estimated cost of $10,000,000 (£2,000,000) and when finished will accommodate 2000 patients.

April 3rd.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Plague.

BUBONIC plague continues to claim a number of victims in Queensland. Up to Feb. 27th 19 cases had been verified since the reappearance of the outbreak. During the last week four deaths have occurred. As regards the outbreak on the Clarence river in New South Wales the President of the Board of Health (Dr. J. Ashburton Thompson) claims that "the campaign of his department against it has been unusually successful." Six cases occurred before any report was made. Between Jan. 7th and 27th six more patients were attacked. Up to Feb. 27th no further cases have occurred. The last plague-infected rat was found on Feb. 26th. A deputation from Grafton protested to the Acting Premier against plague patients being treated at the general hospital at Grafton. The Acting Premier replied that he had discussed the matter with the President of the Board of Health who said that no alteration could possibly be made with regard to the patients at present in the Grafton Hospital. Plague was no longer regarded as infectious, for "it had been established beyond doubt that plague was not communicable by patients." During the last outbreak plague patients were treated in the same wards as ordinary patients at the Coast Hospital and as a matter of medical practice no attention was paid to communicability. The President of the Board of Health has also been communicating to a Sydney newspaper his views on plague generally. He remarked that the official methods in India and Egypt had conspicuously failed because they did not, as was done in New South Wales and other countries, recognise the rat as the sole source of danger.

Vital Statistics of Sydney.

The Government statistician's report for the year 1904 has been issued for Sydney. The birth-rate was 25·67 and the death-rate 11·02 per 1000 of population. The excess of births over deaths was 7540. The record of births for the year is, on the whole, satisfactory. Numerically they were higher than for any year of the decennium. Relatively to population, although not so high as in 1897, they were higher than the average which has prevailed since that period. The illegitimate births, 1343 in number, formed 10·16 per cent. of the birth list. This rate exhibits a slight increase on that for 1903, which was 10·02. The death record is extremely satisfactory, since, when allowance has been made for increase in population, the death-rate of 11·02 per 1000 is 7 per cent. below the average of the preceding five years. The infantile death-rate is well below the average, being at the rate of 98 per 1000 births, as against 123, the average rate for the last ten years. Of persons aged 70 and upwards there were 926 deaths (435 males and 491 females). They were of the following ages: 649 ranging from 70 to 79, 250 from 80 to 89, and 26 from 90 to 99. As regards the causes of death, the decline in the rate was general in nearly every class, the exceptions being among constitutional and developmental diseases and those of the urinary system. Making allowance for the increase in population the rate was only 80 per cent. of the average prevailing during the previous five years. The returns of the Department of Health show that 665 cases of illness from typhoid fever, 737 cases of diphtheria, and 1347 cases of scarlet fever were notified during the year. These numbers, when compared with the deaths from the diseases, give fatality results of 9·9, 5·7, and 1·0 per cent. respectively. In the constitutional diseases there is an advance in each of the great divisions of the class, cancer (382) and phthisis (523) exhibiting numerical increases of 6 and 2 per cent. respectively as compared with the quinquennial average. This advance, of course, appears in much moderated force when allowance is made for the increased population.

A Medical Naval Reserve.

The naval commander-in-chief of the Australian station proposes to form a medical naval reserve to provide naval surgeons in the event of hostilities arising. He has written to the branches of the British Medical Association in the several States asking them to take the matter up in conjunction with the medical schools' authorities and to enlist the sympathy and assistance of the members of the medical profession.

Hospital Affairs.

The Inspector of Charities recently stated that in his opinion the cost of maintenance per bed at the Melbourne Hospital was too high in comparison with other hospitals. A subcommittee was appointed to inquire into and to reply to the statement of the inspector. It has reported that the cost was due mainly to three causes: 1. The building was old and out of date, requiring constant repairs in plumbing, roofing, &c., which last year cost £850. The various wards being on different levels and unconnected and without lifts a large staff of porters was necessary. 2. The large number of patients treated and operations performed, 1770 operations last year as against 700 at the Alfred Hospital, with which comparison was chiefly made. 3. The increase in the nursing staff from 70 to 92, made by order of the Government and against the wish of the nurses themselves. Further, the hospital being a clinical school added to its expenses.—A question of internal discipline has recently taken up the time of the committee of the Melbourne Hospital. One of the sisters in charge of a ward made some remarks in her ward book about the use of sterilised gauze which were supposed to imply a reflection on another sister and she was ordered by the matron to expunge the remarks. She refused and was deposed from her position and given other duties which she declined to do. She was then suspended by the matron and told to resign. As she did not do so she was dismissed. She appealed against the dismissal on the ground that her original statement was correct and the matter of the greatest importance, the use of unsterilised gauze imperilling the lives of the patients. The committee upheld the action of the matron and confirmed the dismissal.—The Women's Progressive Association of New South Wales at its last meeting decided to call the attention of the Premier to the unjust method of selection exercised by the hospital boards of the Sydney and Royal Prince Alfred Hospitals in making appointments to the resident medical staff a question of sex instead of qualification and to ask him to use his influence to have a fairer system adopted in the future.—Although diphtheria and scarlet fever are far from absent in the metropolis of Melbourne the Infectious Diseases Hospital is almost empty and the medical superintendent has reported that the staff was too large for the requirements. As previously pointed out, the admission of patients is so hampered by red-tape regulations that people will not make use of the institution, which is also very inaccessible.

Dr. A. D. Leith Napier's Claims for Compensation.

Dr. A. D. Leith Napier, who some years ago was brought to Adelaide by the Government as medical officer to the Adelaide Hospital, was subsequently appointed surgeon to the second contingent of troops sent to South Africa. In January, 1900, while riding to Marino, he was thrown from his horse and fractured his skull. He recently brought an action in the Supreme Court to recover £6500 compensation from the Government. The Chief Justice held that as the plaintiff was not on actual service when the injury happened he was not entitled to compensation and gave a verdict for the defendants.

March 8th.

Obituary.

JAMES ALEXANDER, A.B., M.D., M.CH. DUB.

Dr. James Alexander died at his residence, Paignton, South Devon, after a short illness, from pneumonia, on April 2nd in his fifty-eighth year. The deceased graduated M.B., M.Ch. of the University of Dublin in 1869, taking the M.D. degree in 1878. Dr. Alexander had been for many years in practice at Paignton. He was surgeon and agent to the Admiralty at Paignton and also surgeon to the post office. He was one of the most popular men in the neighbourhood and was connected practically with every social and philanthropic movement in the

town. For some years he was chairman of the Paignton school board and since its dissolution a member of the higher education committee. In politics he was a Unionist and had been on several occasions president of the local constitutional club. He took the greatest interest in all forms of sport and there was scarcely a sporting club in Paignton of which he was not president or vice-president. Dr. Alexander had a large practice and last summer was elected president of the South-Western branch of the British Medical Association, when he entertained the members and delivered an able presidential address. Dr. Alexander will be much missed in Paignton, especially by the poor to whom he was an unfailing friend.

VISIT OF BRITISH PHYSICIANS AND SURGEONS TO PARIS.

WE publish below the official programme of the proceedings arranged by the Paris Executive Committee for the entertainment and instruction of the British physicians and surgeons who are next month to pay a return visit to our French colleagues.

PROGRAMME.

Wednesday, May 10th —9 P.M.: Reception at the Sorbonne by M. Liard, Rector of the University of Paris, and M. Casimir Perier, ex-President of the French Republic, President de la Société des Amis de l'Université.

Thursday, May 11th.—Morning: Visits to hospitals and laboratories. Afternoon: Visits to the Faculté de Médecine, Assistance Publique, Hôtel de Ville.

Friday, May 12th.—Morning: Visits to hospitals and laboratories. Afternoon: Party to visit Chantilly, now the property of the Institut de France. Evening: *Représentation théâtrale* at the Automobile Club, Place de la Concorde.

Saturday, May 13th.—Morning: Visits to hospitals and laboratories. Afternoon: Visits to the Institut Pasteur and the Hôpital Anglais. Evening: Banquet.

The two following excursions will both leave Paris on Sunday afternoon, May 14th, and return to Paris on Tuesday night, May 16th, or Wednesday morning, May 17th.

1. The companies of Vichy and Evian invite a party of 100 (including ladies) to travel to Vichy, thence to Evian *viâ* Lyons, and back to Paris, all expenses being defrayed by the companies.

2. The Medical Society of Pau and the towns of Arcachon, Biarritz, Salies de Béarn, and Pau invite a party of about 100 (including ladies) to visit these watering places, where they will be received by the municipalities.

The British party will include representatives from provincial centres in England and from Scotland and Ireland.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At the primary examination held recently the following candidates passed in the subjects indicated:—

PART I.

Biology.—H. S. Brown, University College, Nottingham; R. C. R. Fisher, Royal Free Hospital; and F. S. Hawks, King's College Hospital.

Chemistry.—U. J. Bourke, London Hospital; W. B. Dimond, Liverpool; F. S. Hawks, King's College Hospital; and H. H. Smith, Royal Free Hospital.

Materia Medica and Pharmacy.—H. S. Brown, University College, Nottingham.

PART II.

Anatomy.—D. E. S. Davies, King's College Hospital; A. R. Hardy, Manchester; P. J. Lush, London Hospital; O. Marshall, University College Hospital; P. D. Pickles, Leeds; C. S. Spencer, Manchester; E. F. Waddington, Leeds; and M. V. Webb, Royal Free Hospital.

Physiology.—F. M. Cunningham, Royal Free Hospital; D. E. S. Davies, King's College Hospital; A. R. Hardy, Manchester; O. Marshall, University College Hospital; P. D. Pickles, Leeds; C. S. Spencer, Manchester; and M. V. Webb, Royal Free Hospital.

UNIVERSITY OF ABERDEEN.—The following degrees in medicine and diploma were conferred on April 7th:—

Degree of Doctor of Medicine (M.D.).—Robert Grant, Chatham; Andrew Ross Laing, West Cults, Aberdeen; and Alexander Ledingham, Hamilton.

Degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.).—With Second-class Honours: Robert Brown. *Ordinary Degrees*: Mary Ronald Bisset, Alexander Brown, Duncan Coutts, A. Dawson, Walter Allen Elwood, W. Gordon Gordon, William Low, James Breadalbane Macdiarmid, James Edward Mennie, Alexander Mitchell, John Proctor, W. Ewen Reid, John Sangster, James Archibald Bruce Sim, Robert Haig Spittal, John Maxwell Taylor, and Lisette Anne Macdonald Wilson.

Note.—Francis William Falconer has passed all the examinations but will not graduate until he has attained the necessary age.

Diploma in Public Health.—William Anderson, M.B., Ch.B. Aberd., Kintore; George Jamieson Pirie, M.B., Ch.B. Aberd., Orkney; Alexander Robertson, M.B., Ch.B. Aberd., Elgin; and Herbert W. Black Ruxton, M.B., Ch.B. Aberd., Ellon.

UNIVERSITY OF OXFORD.—Mr. Arthur F. Hertz, M.A., M.B., Magdalen College, has been elected to a Radcliffe Travelling Fellowship for three years.

DEATH OF A CENTENARIAN.—The *Times* of April 10th states that Miss Tyler, the oldest inhabitant of Durham, died on April 8th. She completed her 100th year in December, 1904.

VACCINATION GRANT.—Mr. W. H. Hubert, M.R.C.S. Eng., L.S.A., has received the Government grant for successful vaccination in the Shipley district of the Horsham union, Sussex.

ST. JOHN AMBULANCE ASSOCIATION.—In the Brunswick Institute, Wandsworth-road, London, S.W., on April 5th, the London and South-Western railway team of Queen-street, Exeter, won the challenge shield, valued at £50, and each of the five members of the team received a silver medal.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The election of examiners will be held on Tuesday, May 2nd, as follows:—Two examiners in anatomy, four in surgery, two in physiology and histology, two in pathology and bacteriology, one examiner in midwifery and gynæcology, one in biology, two examiners in ophthalmology, one examiner in sanitary law and vital statistics, one in engineering and architecture, two examiners in chemistry and physics, two in dental surgery and pathology, two in mechanical dentistry, one examiner (not being a Fellow or Licentiate of the College) in languages, and one (not being a Fellow or Licentiate of the College) in mathematics, physics, dictation, and English essay. Candidates are requested to lodge their applications in writing with the registrar, at the College, on or before Tuesday, April 25th, at 10 A.M.

ROYAL INSTITUTION.—The following are the lecture arrangements at the Royal Institution after Easter:—Professor L. C. Miall, Fullerian professor of physiology, R.I., three lectures on the Study of Extinct Animals; the Rev. H. G. Woods (Master of the Temple), three lectures on Velasquez; Professor Sir James Dewar, Fullerian professor of chemistry, R.I., three lectures on Flame; Professor J. A. Fleming, three lectures on Electro-magnetic Waves (the Tyndall lectures); Professor H. Marshall Ward, two lectures on Moulds and Mouldiness; Dr. J. G. Frazer, two lectures on the Evolution of the Kingship in Early Society; and Mr. A. H. Savage Landor, two lectures on Exploration in the Philippines. The Friday evening meetings will be resumed on May 5th, when a discourse will be delivered by Professor H. E. Armstrong on Problems underlying Nutrition. Succeeding discourses will probably be given by Professor E. Fox Nicholls, Sir Charles Eliot, K.C.M.G., Professor J. W. Bruhl, Mr. George Henschel, and Sir William H. White.

HOSPITAL MISMANAGEMENT IN RUSSIA.—A local correspondent of the *Novoe Vremya* makes serious charges against the management of the infirmary in Nikolaieff, a large town in the south of Russia. He says that the infirmary is so overcrowded that patients have to sleep in the corridors. Bags stuffed with straw are used as mattresses and the pillows are also stuffed with straw. The supply of linen is so scanty that what is in use cannot be changed and the same beds are occupied successively by infectious and non-infectious cases without removal of the bedclothes. Two or three patients bathe in the same water. The water-closets are only supplied with water in the morning, washhand basins are placed in them, and ice for the use of the patients is broken there. Knives and forks are not provided for the patients who have consequently to eat with their fingers, but strange to say the wards are fairly clean, well lighted, and well ventilated. One of the infirmary servants, inspired by benevolent motives, is in the habit of collecting the food

which is left by the patients in order that he may distribute it among the poorer classes who live in lodging-houses. As many of the patients suffer from typhoid fever there is an obvious risk of spreading infection in this way and the correspondent expresses the opinion that the practice ought to be stopped.

DONATIONS AND BEQUESTS.—The honorary treasurer of the Southport Convalescent Hospital and Sea Bathing Infirmary has received a cheque for £5000 from the trustees of the late Mr. James Holden of Rochdale towards the endowment of the hospital, in consideration of which five beds are allocated in perpetuity for the use of convalescents from Rochdale and district.—Lord Derby has started a bed endowment fund for the Royal Sea Bathing Hospital, Margate, by contributing a donation of £1000 for the endowment of the first bed.—The Duchess of Somerset has sent £150 to the funds of the Alexandra Hospital for Children as the result of a concert held at 35, Grosvenor-square on March 30th.—Mr. W. R. Merry of Exeter has given £100 each to the Royal Devon and Exeter Hospital, the West of England Institution for the Deaf and Dumb, the West of England Eye Infirmary, the West of England Blind Institution, and the Exeter Dispensary, five of the most deserving charities in Exeter.—The late Mr. E. A. Sanders of Exeter has bequeathed £500 each to the Royal Devon and Exeter Hospital, the West of England Eye Infirmary, and the West of England Blind Institution, and £300 to the West of England Institution for the Deaf and Dumb.—Sir George White, Bart., of Bristol has given a donation of £3000 to secure the completion of the Victoria Memorial Hospital, Nice.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Physical Deterioration.

AT the evening sitting in the House of Commons on Tuesday, April 18th, Mr. SLACK will open a debate on the report of the Inter-Departmental Committee on Physical Deterioration and will propose a motion.

HOUSE OF COMMONS.

WEDNESDAY, APRIL 5TH.

The Administration of Poison by Misadventure.

Sir THOMAS DEWAR asked the Home Secretary whether, having regard to the frequency of suicides by poison and loss of life through the administration of poison by misadventure, he would state whether the Government still proposed to amend the law regulating the sale of poisons; and, if so, whether there was any probability of a Bill being introduced by the Government this session.—Mr. AKERS DOUGLAS replied: I fear that on this subject I cannot add anything to the reply which I gave to the honourable Member on March 13th last.

A Post Office Case.

Sir WALTER FOSTER asked the Postmaster-General whether he was aware that a telegraphist named Bullamore submitted a certificate from a private medical attendant at Brixton stating that he was suffering from post-influenzal debility and needed further rest; that the official medical adviser certified that Bullamore's health was as usual and no rest was required; that subsequently a specialist certified that Bullamore's symptoms were genuine and that he could only expect to get relief by prolonged rest and quiet and that the medical department declined to act upon the advice of the specialist; and, if so, whether he would state the attitude that his department adopted towards the certificates of private practitioners.—Lord STANLEY said: I have received special reports respecting Mr. Bullamore's health from his private medical attendant and from a specialist, as well as from the chief medical officer of the Post Office and an aural surgeon whom that gentleman consulted. I have decided, at the suggestion of the chief medical officer, to lay the whole matter before the medical referee to the Treasury. As regards certificates from private practitioners, full consideration is given to them, but I am bound to be guided by the opinion of the medical officers of the department in such matters. In cases of doubt the medical referee is consulted.

The Adulteration of Butter.

Mr. BRIGG asked the President of the Board of Agriculture what foreign nations had inspectors in this country to detect adulteration of their butter and how many inspectors were there belonging to each nation.—Mr. AILWYN FELLOWES said: So far as I am aware no foreign nations have inspectors in this country to detect adulteration of their butter. Several countries, including Denmark, Norway, Sweden, Hungary, Germany, and the United States, have appointed agricultural representatives here, but their duty is rather to find fresh markets for their country's produce and to supply information as to the state of trade than to detect adulteration.

THURSDAY, APRIL 6TH.

Coastguard Surgeons in Ireland.

Mr. O'CONOR KELLY asked the Secretary to the Admiralty whether he would state the number of coastguard surgeons in Ireland; how many held appointments additional to the Admiralty one; and how many devoted themselves exclusively to Admiralty work.—Mr PRETYMAN said: The number of Admiralty surgeons and agents in Ireland is 117. These gentlemen are not required to devote themselves exclusively to Admiralty work.

Civil Surgeons and Income Tax.

Mr. O'DOHERTY asked the Chancellor of the Exchequer whether he was aware that civilian surgeons attached to His Majesty's forces in South Africa had to pay on their salary and allowances income tax to the Imperial exchequer and at the same time contribute to the revenue of the colony; and whether, seeing that civilian surgeons in South Africa were the only civilians attached to the army who paid income tax on their salaries, he would place these surgeons on an equal footing with other civilians attached to the army.—Mr. A. CHAMBERLAIN replied: I will make inquiry into the facts. The information at present in my possession does not enable me to answer the question.

The Treatment of Cases of Sudden Illness in the House.

Captain DONELAN asked the honourable Member for Chorley, as representing the First Commissioner of Works, whether he was aware that in cases of sudden illness of Members of the House there was no private room to which such Members could be brought and that no provision of any kind was available in any part of the building for such emergencies; and whether steps would be taken to remedy this state of affairs.—Lord BALCARRES said: The First Commissioner is not prepared with any proposal to meet this suggestion and he thinks that the appropriation of a room for such a purpose is not a matter within his jurisdiction but in that of the authorities of the House.—Another honourable Member suggested that a medicine chest might be kept in the House. No answer was given.

Drumconrath Medical Relief Dispensary.

Mr. JOSEPH NOLAN asked the Chief Secretary for Ireland whether his attention had been drawn to the action of the Local Government Board in proceeding by sealed order to suppress the Drumconrath Medical Relief Dispensary; whether he was aware that under the new arrangement some of the sick poor would be at least 10 or 12 miles from the nearest medical relief centre; and, if so, whether, in view of the opposition of the ratepayers to the change and the protest of the Ardee board of guardians, within whose district the division affected was situated, against the proposal, he would invite the Local Government Board to reconsider its decision.—Mr. LONG replied: The Drumconrath dispensary district was merged in the adjoining districts of Dunleer and Collon. In each of these districts the residence of the medical officer is now centrally situated and within a reasonable distance of all parts of the district and the Board is satisfied that no revision of its decision is necessary.

Starving School Children.

Dr. MACNAMARA asked the First Lord of the Treasury whether his attention had been called to the Bill to provide, under proper safeguards, for the feeding of hungry children, brought in by the honourable Member for Hoxton, and supported, amongst others, by the honourable Members for Sheffield Brightside, South Islington, West Bradford, Stoke-upon-Trent, and South-West Bethnal Green; and whether, having regard to the fact that these honourable Members were all supporters of the Government, he would give facilities for the second reading of this Bill and for the reference of it to a Grand Committee if the same could be arranged by consent.—Mr. BALFOUR said: I think the honourable Member is under some misapprehension when he supposes that the objection that I am sure every leader of the House feels to giving facilities for private Members' bills is at all modified by consideration of the quarter from which the support of the Bill comes. The objection is quite of a general character and I do not think I can waive it in this instance, especially as there is a committee appointed to inquire into this question.—Mr. CROOKS: May I ask whether the First Lord of the Treasury is or is not of opinion that part of the business of the Prime Minister of the country is to study the condition of the underfed children of the country.—Mr. BALFOUR: It is with a view to studying the condition of the underfed children of the country that we have appointed a committee to give us the necessay knowledge of the facts. For my part I think we ought not to legislate on this subject without that knowledge.

FRIDAY, APRIL 7TH.

Letter-writing in Asylums.

Mr. O'DOHERTY asked the Chief Secretary for Ireland what were the rules regarding the writing of letters by patients confined in the Dundrum Central Asylum; how many could be written by a patient during a month; whether an appeal lay to the lunacy inspectors or to him in cases where the governor did not submit letters written by patients; and whether his attention had been called to a number of letters written by a patient in this asylum named Logue during the months of September and October, 1904, and January, 1905, not forwarded by the governor, and whether he would inquire into this case.—Mr. LONG replied: The regulations permit patients to write two letters on the first of each month and at other times in special circumstances. All communications which, in the opinion of the resident physician and governor, contain improper matter are submitted by him to the inspectors of lunatic asylums and are dealt with by them under the asylum rules. Certain letters recently written by the patient named were withheld by the resident physician and governor with the concurrence of the inspectors.

MONDAY, APRIL 10TH.

The Parliamentary Medicine Chest.

Answering Sir WILLIAM TOMLINSON, Lord BALCARRES stated that a medicine chest was kept in the House of Commons for use in emergencies. The key was kept by the constable on duty who was instructed to allow nobody to open the chest except a duly authorised medical man.

TUESDAY, APRIL 11TH.

A Question Concerning Horseflesh.

Mr. CREMER asked the Under Secretary of State for Foreign Affairs whether he was now in a position to state the result of the inquiries which in August last year he promised should be made concerning the number of old and slaughtered horses, or horses unfit for work, that were periodically exported from this country to Belgium, Holland, and Germany; whether he could say for what purpose their carcasses

were used; and whether their flesh was made into condiments of various kinds, returned to this country, and sold as articles of food.—Earl PERCY answered: I regret that owing to an oversight some delay occurred before the information was asked for but we hope to obtain it before very long.

BOOKS, ETC., RECEIVED.

CHURCHILL, J. AND A., 7, Great Marlborough-street, W.
The Book of Prescriptions (Beasley). With an Index of Diseases and Remedies. Rewritten by E. W. Lucas, F.I.C., F.C.S., Pharmaceutical Chemist. With an Introduction by Arthur Latham, M.A., M.D., F.R.C.P., Senior Assistant Physician at St. George's Hospital. Eighth edition. Price 5s. net.

COLLINGRIDGE, W. H. AND L., "City Press" Office, 148 and 149, Aldersgate-street, E.C.
The City of London Directory for 1905. Price 12s. 6d.
The Horse: its Care and Management. By Henry E. Fawcus. Edited by T. W. Sanders, F.L.S. Price 1s. 6d.

DYBWAD, JACOB, In Kommission bei, Kristiania. (A. W. BROGGERS, Buchdruckerei.)
Aus dem pathologisch-anatomischen Institute in Kristiania. Untersuchungen über die Häufigkeit, Lokalisation und Ausbreitungswege der Tuberkulose, insbesondere mit Berücksichtigung ihres Sitzes in den Lymphdrüsen und ihres Vorkommens im Kindesalter. Von Francis Harbitz, Professor der pathologischen Anatomie und allgemeinen Pathologie an der Universität zu Kristiania. (Videnskabs-Selskabets Skrifter. I. Math.-naturv. Kl. 1904. No. 8.) Price not stated.

FISCHER, GUSTAV, Jena.
Ueber den Zusammenhang zwischen Ovarialfunction, Wellenbewegung und Menstrualblutung, und ueber die Entstehung des sogenannten Mittelschmerzes. Von Dr. Th. H. Van de Velde, Haarlem. Price M.3.

FROWDE, HENRY, London, Edinburgh, Glasgow, New York, and Toronto.
Author and Printer. A Guide for Authors, Editors, Printers, Correctors of the Press, Compositors, and Typists. With full list of Abbreviations. By F. Howard Collins, Author of "An Epitome of the Synthetic Philosophy of Herbert Spencer," with the Assistance of many Authors, Editors, Printers, and Correctors of the Press. Price, cloth, 5s. net; leather back and corners, cloth sides, gilt top, 8s. 6d. net.

GREEN, WILLIAM, AND SONS, Edinburgh and London.
An Introduction to Physiology. By L. A. Hodgkinson Lack, M.B., Ch.B. Price 8s. net

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BAINES, FRANCIS E., Captain, I.M.S., L.R.C.P. Edin., has been appointed Clinical Assistant to the Chelsea Hospital for Women.
FERGUSON, JOHN P., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health of the Misterton Rural District.
HIGSON, J. R., M.B., C.M. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Lewisham District of the county of London.
HUNT, A. W. D., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Chagford District of the county of Devon.
KEYSER, CHARLES R., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Cancer Hospital, Fulham-road, S.W.
LETT, HUGH, M.B., Ch.B. Vict., F.R.C.S., has been appointed Assistant Surgeon to the London Hospital.
MACKENZIE, F. S., M.B., Ch.B. Edin., has been appointed House Surgeon to the County Hospital, York.
MAYOU, STEPHEN, F.R.C.S. Eng., has been appointed Ophthalmic Surgeon to the Hospital for Epilepsy and Paralysis, Maida Vale, London, W.
MOON, R. O., M.D. Oxon., M.R.C.P. Lond., has been appointed Physician to Out-patients at the Royal Waterloo Hospital.
PHILLIPS, G. A., M.R.C.S. Eng., L.S.A., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Walsall District of the county of Stafford.
RANDOLPH, CHARLES, M.R.C.S. Eng., L.R.C.P., L.M. Edin., has been appointed Medical Officer of Health by the Wellington (Somerset) Rural District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

AUCKLAND, RURAL DISTRICT COUNCIL OF.—Medical Officer of Health and Sanitary Surveyor. Salary £600 per annum, rising to £800.
BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House Surgeon. Salary £80 and fees.
BRISTOL DISPENSARY.—Vacancy on Medical Staff.
BRISTOL GENERAL HOSPITAL.—Assistant House Physician. Salary £60, with board, residence, &c. Also Senior House Surgeon. Salary £120 per annum, with board, residence, &c.
BUXTON, DEVONSHIRE HOSPITAL.—House Surgeon. Salary £100 per annum, with apartments, board, and laundry. Also Assistant House Surgeon. Salary £70 per annum, with apartments, board, and laundry.
CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Junior House Surgeon for six months. Salary £50 per year, with board, apartments, and laundress.
EXMINSTER, DEVON COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary £125, rising to £155, with board, residence, and laundry.
GERMAN HOSPITAL, Dalston, N.E.—Honorary Assistant Surgeon. Also Honorary Assistant Physician.
HARTSHILL, STOKE-UPON-TRENT, NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL.—Assistant House Surgeon for six months. Honorarium £25, and board, apartments, and washing.
HASTINGS, FAIRLIGHT HALL CONVALESCENT HOME.—Visiting Physician (Honorary).
HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, with board and residence.
HOSPITAL FOR WOMEN, Soho-square, W.—House Physician for six months. Salary £30.
HULL ROYAL INFIRMARY.—Casualty House Surgeon. Salary £50 per annum, with board and lodging.
LONDON FEVER HOSPITAL, Liverpool-road, N.—Assistant Resident Medical Officer. Salary £120 per annum, with board and lodging.
MACCLESFIELD, CHESHIRE COUNTY ASYLUM.—Assistant Medical Officer.
MARGARET-STREET HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret-street, Cavendish-square, W.—Physician (honorary).
NATIONAL HOSPITAL FOR THE RELIEF AND CURE OF THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury.—Resident Medical Officer. Salary £100 a year, with board and residence.
NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Junior Resident Medical Officer. Salary £70 per annum, with board, residence, and washing.
NORTHAMPTON, ST. ANDREW'S HOSPITAL FOR MENTAL DISEASE Junior Assistant Medical Officer. Salary £200 per annum, with board, rooms, and washing.
NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary £100, with board, lodging, and washing.
PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—House Physician. Also House Surgeon. Both for six months. Salaries at rate of 50 guineas a year, with board and residence.
RYHOPE, SUNDERLAND BOROUGH ASYLUM.—Assistant Medical Officer. Salary £120 a year, with allowances, rising to £160.
ST. MARY'S HOSPITAL FOR SICK CHILDREN, Plaistow, E.—Assistant Resident Medical Officer, unmarried, for six months. Salary at rate of £30 per annum, with board, residence, and laundry.
SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Clinical Assistants.
TOTTENHAM HOSPITAL, London, N.—Honorary Anæsthetist.
UNIVERSITY OF LONDON.—William Lindley Research Studentship in Physiology. Value £100, for one year.
VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—Two vacancies on Surgical Staff to Out-patients. Also Honorary Anæsthetist.
WAKEFIELD, WEST RIDING ASYLUM.—Junior Assistant Medical Officer. Salary £140, rising to £160, with apartments, board, washing, and attendance.
WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.
WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Anæsthetist (honorary). Also Fourth Assistant Physician.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory and Workshop Act at Sherburn in the county of York.

Births, Marriages, and Deaths.

BIRTHS.

DOW.—On April 8th, at High-street, Lewes, Sussex, the wife of W. A. Dow, M.D., of a son.
DOWSETT.—On April 5th, at St. Dunstan's, Lebanon-park, Twickenham, the wife of Ernest B. Dowsett, M.R.C.S., L.R.C.P., L.D.S., of a daughter.
KNIGHT.—On April 7th, at The Turret, Streatham High-road, S.W., the wife of G. David Knight, M.D., of a daughter.
UNITT.—On April 10th, at Quorn, Loughborough, the wife of J. A Unitt, L.R.C.P., M.R.C.S., of a son.

MARRIAGES.

HERRING—CALLENDER.—On April 7th, at St. James's United Free Church, Edinburgh, Percy Theodore Herring, M.D., F.R.C.P.E., to May, elder daughter of Thomas Callender, Esq., of Edinburgh.
HUTTON—SMART.—On April 12th, in the University Chapel, Glasgow, William Kilpatrick Hutton, M.A., M.B., to Christian Elder Symington, daughter of William Smart, LL.D.

DEATH.

TRUMAN.—On April 8th, at The Home Field, Putney-hill, Edwin Thomas Truman, M.R.C.S., of Old Burlington-street, W., in his 87th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

POLICE CALLS FOR MEDICAL MEN.

WHAT was described as an underlying professional principle came up for discussion at a recent meeting of the Worcestershire standing joint committee. The chief constable (Colonel Walker) reported that Dr. C. Pollard of Worcester had sent in a claim for a fee of 7*s.* 6*d.* for attending a case of suicide. Last November a man who had cut his throat just outside the city was found by a constable at midnight and Dr. Pollard, who was summoned, attended, but when he arrived the man was dead. Dr. Pollard attended the inquest but now applied for his fee for the visit. It had not been the custom in the county to pay a fee when the medical man did not see the body before death and therefore he declined to pay. He had received a letter from the Medical Defence Union stating that the inquest fee had nothing to do with the charge for the midnight visit. There was an underlying professional principle affecting the matter which had induced the council of that union to take it up and it gave notice that unless the payment was made it should take proceedings for its recovery. Dr. H. E. Dixey, a member of the committee, said that the two attendances were quite separate and he thought that the money should be paid. If the man had died immediately after the medical man arrived they would have paid without demur and he thought it straining the point to refuse. As the medical man had to leave his bed at midnight he considered the fee very reasonable; it might justly have been half a guinea. Mr. Pritchett thought that the fee given at the inquest ought to be held sufficient payment. If the medical profession were not satisfied with the fees paid under the Coroners Act they should endeavour to get them increased. After further discussion the chief constable said he thought that they were liable. Objection was taken to the payment on the ground that it was undesirable to establish a precedent. Eventually, by six votes to five, it was decided that the money should be paid.

THE LORD OF THE MANOR'S HERIOT AT AN INQUEST.

To the Editors of THE LANCET.

SIRS,—Your correspondent, Mr. W. H. Marsden, must obviously be right in his suggestion that the "stagg" forfeited as deodand in the case quoted by Dr. J. J. Udale was the horse which caused the injury—perhaps the word is connected with the more familiar "nag." A stag conceivably might be forfeited if it caused death when kept in confinement, but otherwise it could hardly be the subject of "deodand" or "heriot." I take it that in 1794 stags in Westmorland were pretty universally both legally and in fact animals *feræ naturæ* and not the subject of ownership by anyone, still less by anyone who was liable to forfeit either deodands or heriots to Lord Lonsdale.

I am, Sirs, yours faithfully,

April 10th, 1905. A.

THE CLERGY AND QUACKS.

THE following remarks occurring in the Dedication "To Ministers of the Gospel of every Denomination" prefacing "Essays on the Means of Avoiding Habitual Sickliness, and Premature Mortality," published in 1802, are not inappropriate at the present time. The name of the author is not given and it is dated from Clifton, Jan. 1st, 1802. "..... Look into whatever newspaper you please, you will find reverend names, dangling by dozens, to the tails of frauds at *half a guinea the bottle*. I would fain hope that the appearance of these names, in such a disgraceful position, does but add one item more to the advertisers' account of forgery. I, at least, for one, am unwilling to believe, that so many members of a respected profession can lend or let out their credit for a fox's paw, to rake the pockets of the poor; whose money, however ill they can spare it, is often the least valuable thing, out of which, from reliance on the judgement of the clergy, in many cases they find themselves choused."

In connexion with the above passage which we recently came across, it is interesting to note that in the *Times* of April 12th there appears the following advertisement:—

J. P. SANDLANDS, Author of "The Voice and Public Speaking." "The Microbe," "Disease," "Cancer" (which means no more "Cancer Research"), &c., and Specialist in "Throats," Chest, Nerves, Cancer, and Dietetics, may be CONSULTED between 3.30 and 5.30, Saturdays only, at the Midland Hotel, St. Pancras. Letters, Brigstock, Thrapston.

J. P. Sandlands, the self-styled specialist, is, we find on reference to the Clerical Directory, the Rev. John Poole Sandlands of Brigstock Vicarage, Thrapston. We may remark that being ordained to the cure of souls is not the same thing as being ordained to the cure of bodies, and although we cordially approve of the clergy taking an interest in the sanitation of their parishioners, it is not becoming that they should act as quack "doctors" at a metropolitan hotel. We think that the Rev. John Poole Sandland's Bishop might well hint to him that such conduct is unbefitting a clerk in holy orders.

"IN HOSPITAL," BY A PATIENT.

IN England, where so many people find an outlet for superfluous energy or unoccupied time in the propagation of guilds and societies for all sorts of worthy and of trivial purposes, it is a pity that no reformer has yet arisen to start or to lead a crusade for the "suppression of medical matter in non-medical magazines." He would have for his society both an alliterative title and a commendable aim. The most recent production with which we have been confronted is in the *Grand Magazine* by a "Private Patient." Anyone who wishes to encourage within himself a faint feeling of approaching nausea had better study the pages to which we refer. The writer, a neurotic amateur journalist, it might be imagined from intrinsic evidence, went into the "pay wards" of a London hospital in order to have the appendix removed. So far his conduct is from some points of view irreproachable. Unfortunately, he sees fit to send to the *Grand Magazine* a detailed account of everything that he remembers of his stay in hospital. What useful or beneficial purpose such writing can serve we are utterly unable to perceive. It merely panders to a morbid curiosity that is already too fully stimulated by the daily press. It supplies future patients, moreover, with just that little knowledge that is so often dangerous. It gives an exaggerated notion of many slight matters and a minimised idea of others that are important. To the non-medical reader such effusions must afford chiefly, we imagine, a vague sense of indecency; to the medical reader they offer only a feeling of irritation against the misguided person who writes of what he only partly understands.

PARTHENOGENESIS?

THE following advertisement appears in the *Times* of April 12th:—

MARRIED COUPLE, French, no children, seek SITUATION as LAUNDRYMAIDS in gent.'s family. Both thoroughly understand the work in all branches. Personal character.—J., 42, Marlborough-road, Oxford.

It hardly seems necessary for the advertisers to state that they have no children!

DAMMING OF THE THAMES.

To the Editors of THE LANCET.

SIRS,—Among the objections to this scheme important medical ones seem to have been overlooked. As the Thames at London would cease to be tidal a great cause of the comparative healthiness of that city would also cease—the displacement of air now produced by the tide—and we could anticipate a consequent increase of disease, due, also, to very imperfect flushing by the small stream through a long lake. The overflowing of low banks on the Surrey side after storms would lead to insanitary conditions and the increased difficulties of sewerage and drainage would be enormous and costly. If the dam be constructed whence would much of the water-supply of London be obtained? and at what cost? None of the water should be drawn from the Thames. It would be highly dangerous to drink (unboiled) the polluted fluid taken from the almost stagnant ditch. Remember Lincoln. The demerits of the scheme outweigh the many advantages; commerce might be enhanced but health would suffer so much that London would become a city to avoid.

I am, Sirs, yours faithfully,

Malvern, April 11th, 1905. STANLEY HAYNES, M.D. Edin.

DEFECTIVE CHILDREN.

To the Editors of THE LANCET.

SIRS,—Would any member of the profession advise where it is possible to get a governess for a child, aged seven, who is somewhat mentally deficient and requires great care in training. A good salary will be given.

I am, Sirs, yours faithfully,

G. P.

MOSQUITO CURTAINS AND MALARIA.

To the Editors of THE LANCET.

SIRS,—The discovery of Sir H. Arthur Blake that the transmission of malaria by mosquitoes is recognised in Sanskrit literature, referred to in THE LANCET of April 8th, p. 973, recalls the following passage in Herodotus which is of some interest in that connexion. "The contrivances which they use against gnats wherewith the country swarms are the following. In the parts of Egypt above the marshes the inhabitants pass the night upon lofty towers, which are of great service, as the gnats are unable to fly to any height on account of the winds. In the marsh country, where there are no towers, each man possesses a net instead. By day it serves him to catch fish, while at night he spreads it over his bed in which he is to rest, and, creeping in, goes to sleep underneath. The gnats, which if he rolls himself up in his dress or in a piece of muslin are sure to bite through the covering, do not so much as attempt to pass the net." (Rawlinson's Herodotus, vol. ii., p. 154.) It may be inferred from it, however, that the dual advantage of an effective "mosquito curtain" was not then known in Egypt, for no fact so interesting could have escaped the notice of the historian. A distinguished orientalist to whom I wrote on the subject kindly informed me that there was not to his knowledge any allusion in Semitic writings anticipating the modern theory, although there are, of course, many to the direct aggressions of insect pests.

I am, Sirs, yours faithfully,

Clifton, April 11th, 1905. D. A. ALEXANDER.

A SAFETY STRAP FOR INFANTS.

THE little invention depicted in the appended illustration may be of real service to many mothers. It consists of a leather girdle to which are affixed side-straps in such a way that if the infant is seated in a chair the side-straps can be fastened to the arms of the chair and so prevent falls. A large number

of serious falls out of chairs are reported yearly among infants when they first become old enough to sit up and the safety strap under notice should prevent these catastrophes in a comfortable way. Neither a front bar fastened to the arms of the chair, pressing upon the infant's abdomen, nor a strap passing tightly round his waist to be attached to the back of the chair can be pleasant for the infant, but this safety strap really allows of considerable freedom while making falls from mail cart or chair impossible. A second use of the safety strap should also be mentioned. The chair loops make most convenient handles by which the infant can be supported when making his first efforts to walk. The appliance is made by Mr. James Bard, saddler and harness-maker, 13, Thayer-street, Manchester-square, London, W., and the price in solid leather is 2s. or 2s. 6d., according to the size required.

AN ESPERANTO MEDICAL DICTIONARY.

To the Editors of THE LANCET.

SIRS,—The French Medical Esperanto Society is engaged in compiling a dictionary of terms used in medical science and desires to have the coöperation of medical men in other countries, so that the terms selected may be submitted to them for criticism and approval before being published. Would those of your readers who are already familiar with Esperanto or are interested in that wonderful work of Dr. Zamenhof kindly communicate with me in order to facilitate that object.

I am, Sirs, yours faithfully,
Kingsland, Shrewsbury, April 10th, 1905. E. T. WHITAKER.

SIDE-SLIP.

THE committee of the Cyclists' Touring Club recently met at 47, Victoria-street, Westminster, when it learned that nearly 60 devices had been entered for competition for the large monetary prizes offered for a satisfactory solution of the side-slipping problem, while at least an equal number of inventors have put forward their theories without actually entering. The trials themselves will probably take place in the neighbourhood of London during Whit-week, upon natural and artificial surfaces calculated to test the merits of the devices to the utmost. Side-slip is responsible for such a large proportion of the cyclist's mishaps that any remedy for it is of interest to medical men.

UNSOUGHT-FOR PUBLICITY.

To the Editors of THE LANCET.

SIRS,—I should like to refute a misrepresentation in some of the daily papers—namely, that I interviewed a representative of the *Evening Standard and St. James's Gazette* and supplied him with details of my case on multiple personality. A gentleman representing himself as one of the editors of the *Standard* called on me. I protested against the shameful way the *Daily Express* had dealt with it. I gave him a copy on the promise that no sensational details were to be published. I am disappointed in the want of good taste shown. The publication of the case could not be avoided as it was already decided upon. I hoped I had modified it. As the patient's friends read the descriptions it is very trying to them as well as to me.

I am, Sirs, yours faithfully,
Belsize-park, N.W., April 5th, 1905. ALBERT WILSON.

SHOULD THE PATHOLOGIST CLEAN THE MORTUARY?

AT the last meeting of the burial board at Chard a discussion arose with reference to the town mortuary which happened to be situated within the cemetery precincts. A local medical man had recently made a necropsy at the mortuary and apparently had left without the place being properly cleansed. The burial board thereupon wrote to him, requiring him to get the mortuary cleaned and to do so on all future occasions. The medical man replied that after he had made the post-mortem examination he instructed a man to put the place in order and understood that it had been done. At the same time, he complained that no notice had been given to the medical men of their responsibility and added that the mortuary had no water laid on in the building nor did it contain necessary appliances. Eventually it was resolved to make it obligatory on medical men to leave the mortuary in proper condition after it had been used and for the board to supply the necessary utensils.

A CRUSADE AGAINST PHTHISIS.

To the Editors of THE LANCET.

SIRS,—Possibly your correspondent "H. W." refers to a book called "The Crusade against Phthisis," by A. B. de Guerville (London: Hugh Rees, Limited. 1904. Pp. 34. Price 6d.), which was noticed in your issue of Feb. 4th, 1905, p. 300. I am, Sirs, yours faithfully,
April 10th, 1905. M.D.

DOVER AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—I have seen the letter signed "Paddington" in THE LANCET of April 1st. I shall be glad to furnish the writer with any information as regards this town if he will apply to me.

I am, Sirs, yours faithfully,
WOLLASTON KNOCKER, Town Clerk.
Castle Hill House, Dover, April 6th, 1905.

To the Editors of THE LANCET.

SIRS,—I am much obliged to Dr. M. K. Robinson and Mr. J. R. Long for so kindly answering my inquiry *re* Dover as a health resort.

I am, Sirs, yours faithfully,
London, April 11th, 1905. PADDINGTON.

Experientia docet.—Seeing that there was no written agreement and that B could not guarantee that A should obtain the appointment, we think that the most fair arrangement would be for B to give A £7 10s.

Censor.—Our opinion is that even if the custom mentioned is common in India, yet the General Medical Council would by no means approve of a registered medical man taking such a post.

Medicus.—As the post is in Great Britain our correspondent is advised to apply to the Pharmaceutical Society of Great Britain, 16 and 17, Bloomsbury-square, W.C.

Hector.—We doubt whether mumps can be conveyed by letter. All evidence goes to prove that the disease is only communicable from person to person.

E. C. W.—The point at issue is a purely legal one and our correspondent is recommended to consult his usual legal adviser.

A. H. J.—Our correspondent's letter requires careful consideration but will receive immediate attention.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.).

WEDNESDAY (19th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.) Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.).

THURSDAY (20th).—St. Bartholomew's (1.30 P.M.), St. Thomas' (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex

(1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.).

FRIDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Royal Ear (10 A.M.).

SATURDAY (22nd).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (18th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Dr. T. G. Horder: (1) Bacillus Influenzæ as a Cause of Endocarditis; (2) Gonococcus Endocarditis.—Dr. Klein: On the Vitality of the Typhoid Bacillus in Shell-fish.

THERAPEUTICAL SOCIETY (Apothecaries' Hall, Blackfriars).—3.30 P.M. Council Meeting. 4 P.M. Papers:—Dr. G. Herschell: The Application of Drugs to the Interior of the Stomach by means of Sprays or Nebulæ.—Dr. J. H. Bryant: Alginoid Iron and its Therapeutical Uses.

WEDNESDAY (19th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Exhibition of Pond Life. Paper:—Mr. A. E. Conrady: On the Application of the Undulatory Theory to Optical Problems.

ROYAL METEOROLOGICAL SOCIETY (Institution of Civil Engineers, Great George-street, Westminster, S.W.).—7.30 P.M. Papers:—Mr. W. H. Dines: An Account of the Observations at Crinan in 1904 and Description of a New Meteorograph for Use with Kites.—Dr. H. R. Mill: Rate of Fall of Rain at Seathwaite.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (20, Hanover-square, W.).—5.30 P.M. Papers:—Dr. H. McClure: The Climatology of the Sahara.—Dr. E. Felkin: Sea Voyages for Invalids.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (17th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. S. E. Dore: Clinique. (Skin.) 5.15 P.M. Dr. A. Morison: Modes of Death in Heart Disease.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—4 P.M. Mr. Dunn: Practical Ophthalmology.

TUESDAY (18th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. C. Thomson: Clinique. (Medical.) 5.15 P.M. Dr. P. J. Cammidge: Pitfalls in the Examination of Urine.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—3.30 P.M. Mr. C. Williams: Skiagraphy.

WEDNESDAY (19th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. H. Pinch: Clinique. (Surgical.) 5.15 P.M. Mr. H. L. Barnard: Gastric Surgery.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—3 P.M. Mr. Bidwell: Intestinal Surgery. 4.30 P.M. Dr. S. Taylor: Surface Anatomy.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Demonstration: Dr. Abercrombie: Nose.

THURSDAY (20th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—11 A.M. Dr. Candler: Bacteriology.

FRIDAY (21st).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.). 2 P.M. Clinical Examination of Blood and Urine.

SATURDAY (22nd).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10.30 A.M. Dr. Candler: Bacteriology.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 13th, 1905.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
April 7	29·76	S.W.	0·13	69	53	35	39	40	Raining
,, 8	29·99	N.E.	0·15	91	48	34	35	37	Cloudy
,, 9	29·71	S.W.	...	56	51	37	42	43	Raining
,, 10	29·41	S.E.	0·46	60	51	43	45	45	Raining
,, 11	29·32	S.	0·30	72	56	45	47	48	Overcast
,, 12	29·76	S.W.	0·01	91	60	46	47	49	Overcast
,, 13	29·81	S.W.	...	105	62	47	51	56	Fine

During the week marked copies of the following newspapers have been received:—*Freemann's Journal, Herefordshire Mercury, Windsor and Eton Express, Liverpool Courier, Morning Leader, Manchester Evening News, Newcastle Daily Chronicle, Newcastle Journal, Westminster Gazette, Surrey Advertiser, Reading Mercury, Mining Journal, Local Government Chronicle, Daily News, Liverpool Post and Mercury, Daily Chronicle, Standard, Literary Digest, &c.*

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